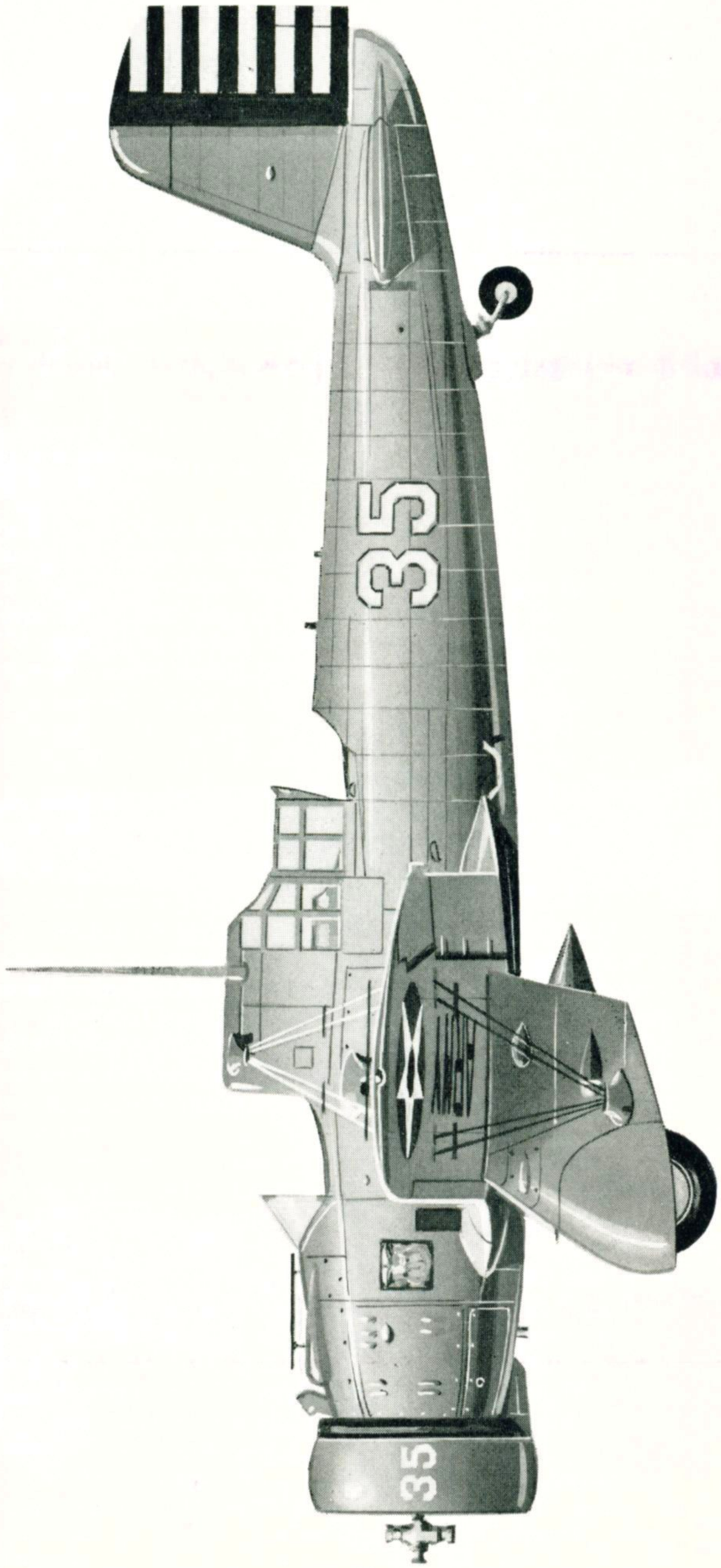
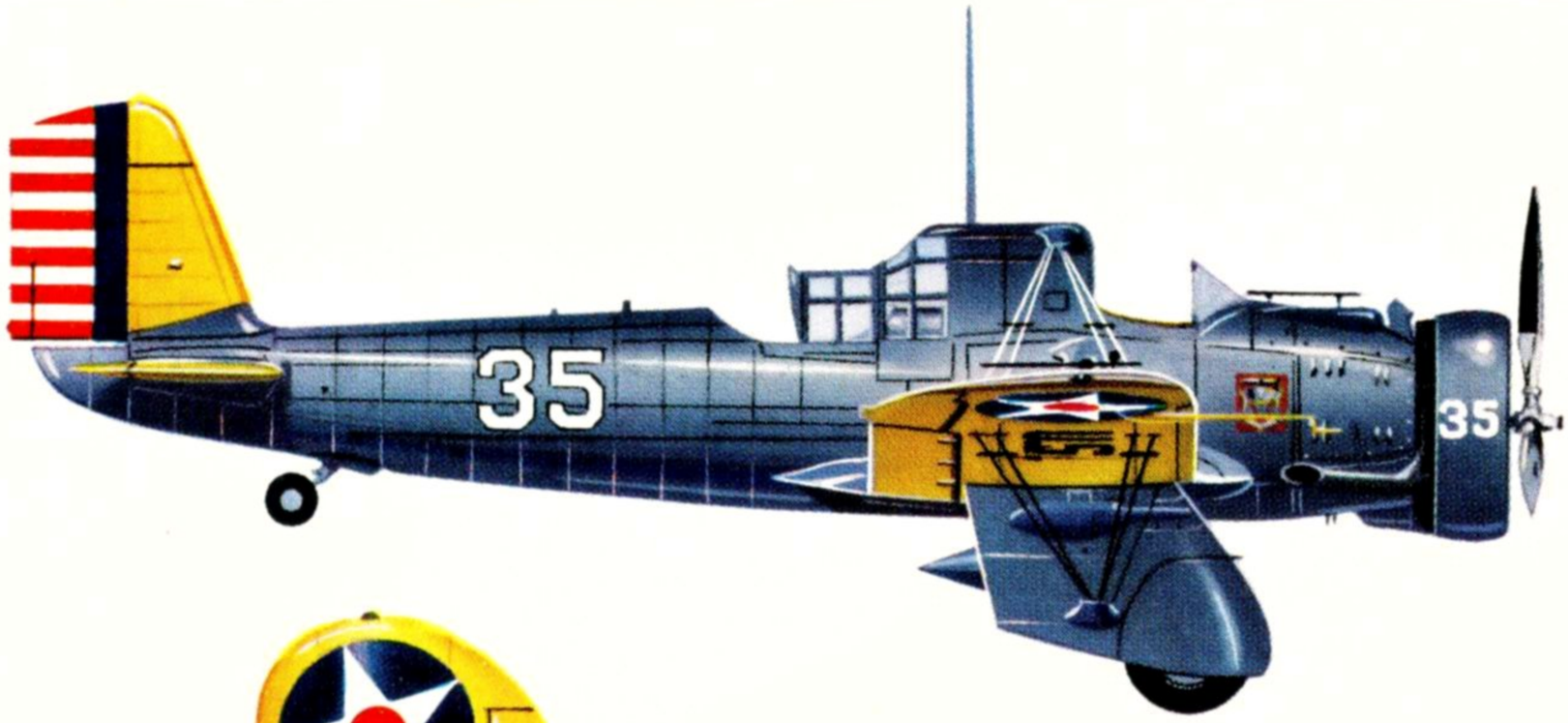
# PROFILE PUBLICATIONS

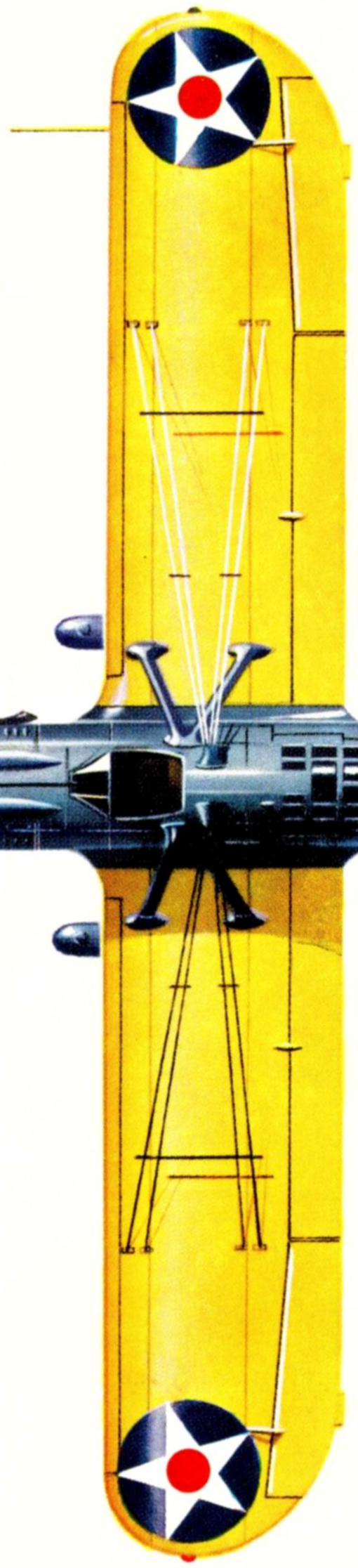
# The Curtiss Shrike

**NUMBER 128**

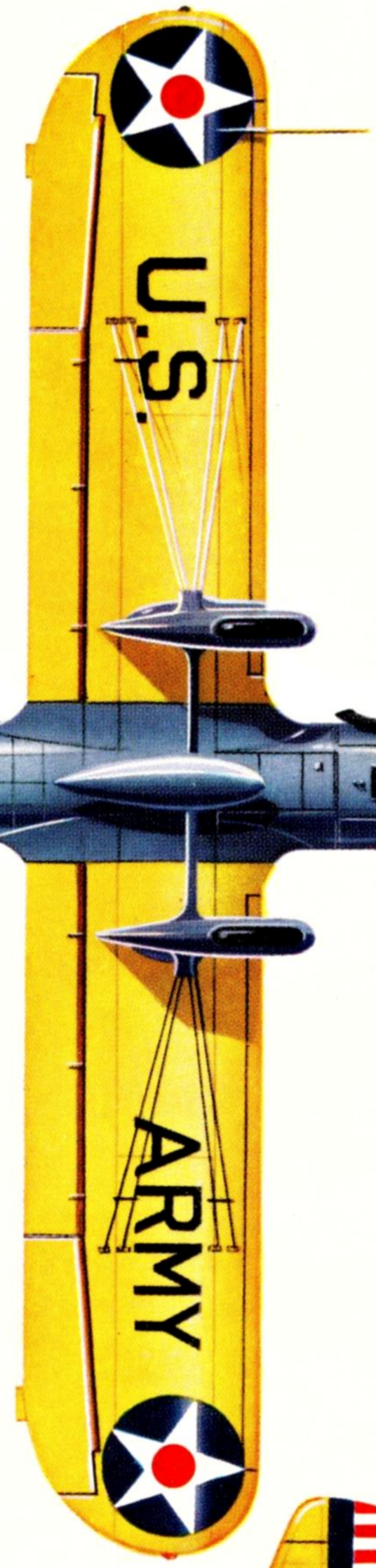
RETAIL PRICE
UNITED KINGDOM TWO SHILLINGS
UNITED STATES & CANADA 50 CENTS

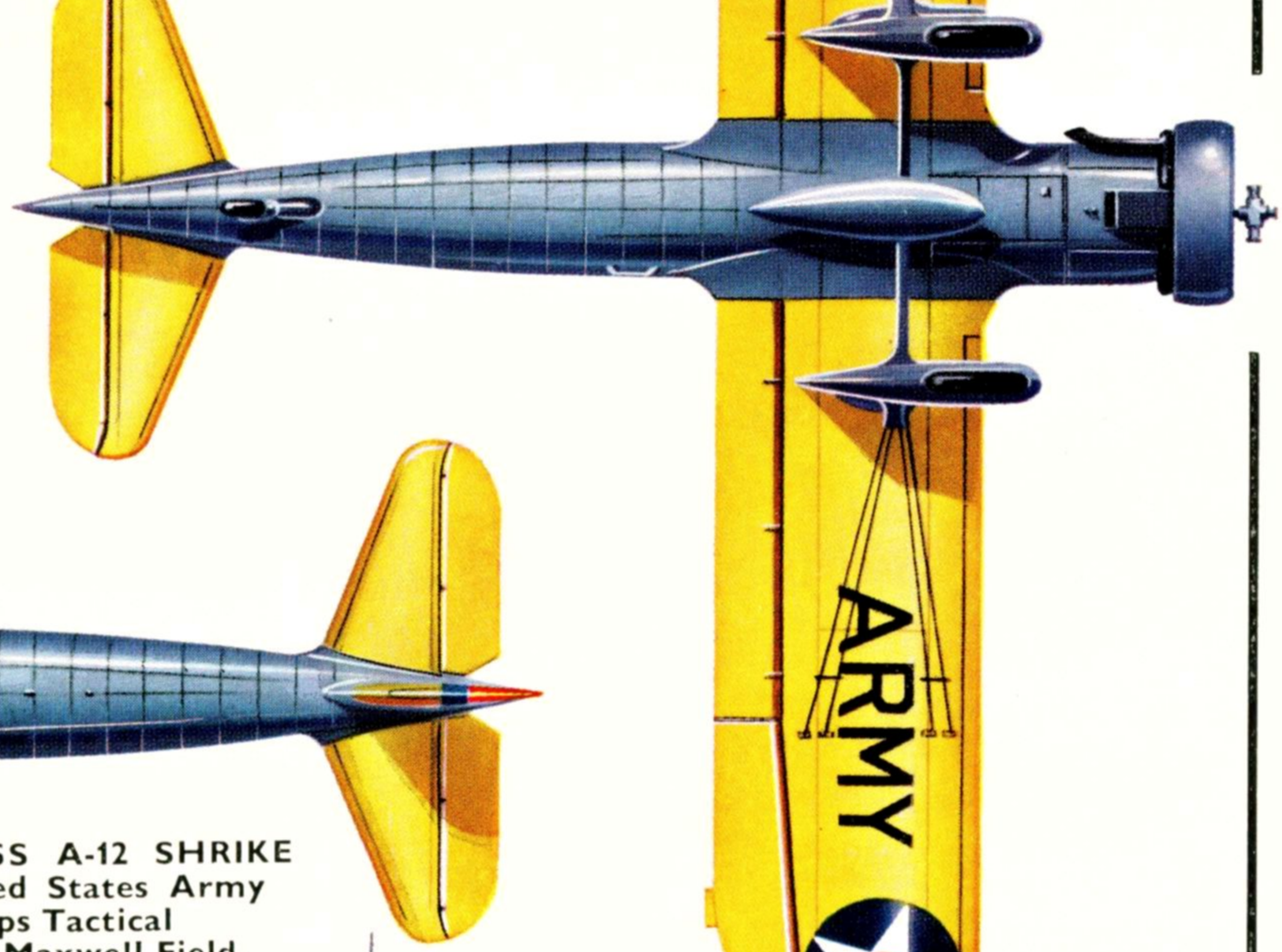




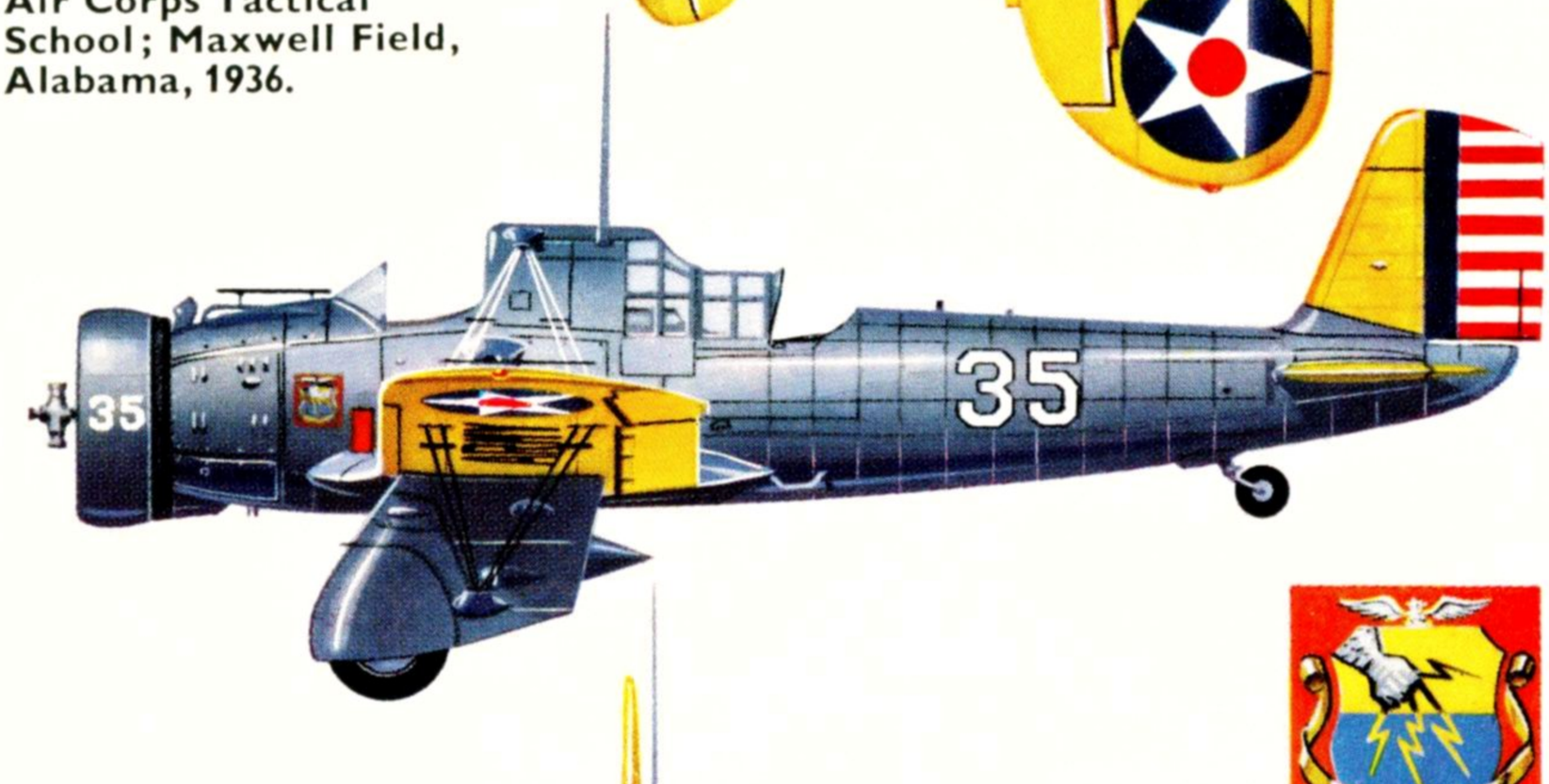



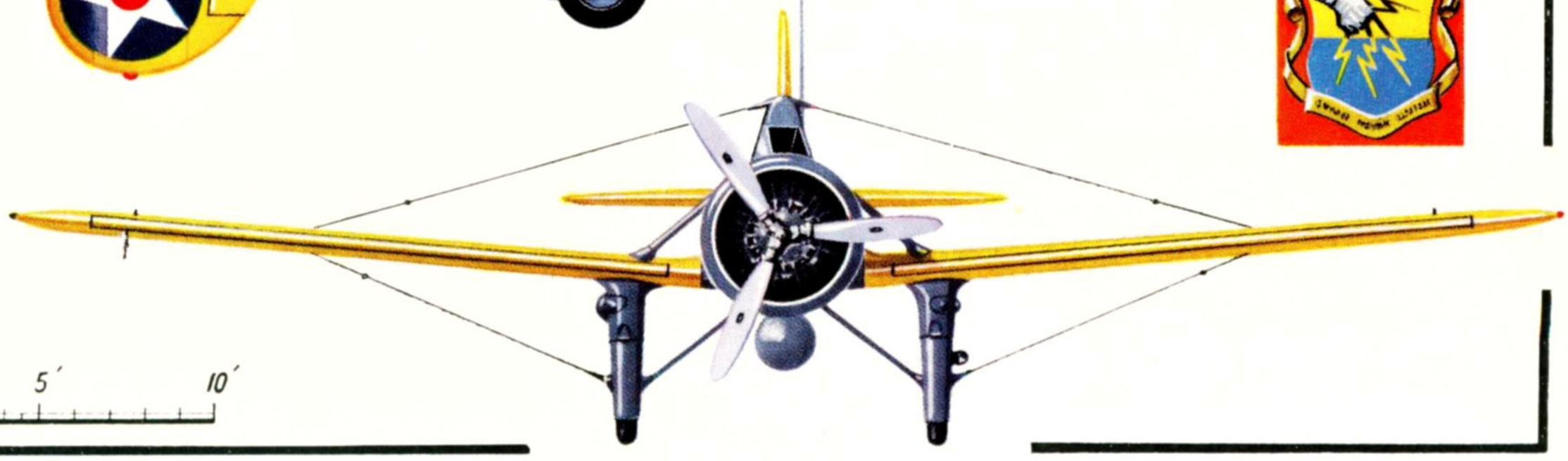




CURTISS A-12 SHRIKE
of United States Army
Air Corps Tactical
School; Maxwell Field,
Alabama, 1936.





5′ 10′

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# The Curtiss Shrike

*Curtiss XA-8, serial number 30-387, as it appeared during initial testing at Wright Field, Ohio in December 1931.*
(Photo: Peter M. Bowers Collection)

**Compiled by THE AMERICAN AVIATION HISTORICAL SOCIETY**
**KENN C. RUST, Journal Editor, and WALTER M. JEFFERIES Jr., Technical Editor**

Throughout the 1920s, the United States Army Air Service and Army Air Corps had only one group, nominally of three squadrons, serving the function of attack aviation—low level strafing and bombing in support of ground forces. This was the 3rd Attack Group, stationed at various airfields in Texas and equipped with De Havilland DH-4 and later Curtiss A-3 biplane aircraft. By 1930, with aircraft performance increasing slowly but steadily, the Army Air Corps determined to investigate the possibility of putting into service a high performance, all metal, low wing airplane designed specifically for the attack rôle.

Two experimental machines were ordered for testing, the Curtiss XA-8 Shrike and the Fokker XA-7. Both were powered by the popular Curtiss V-1570 Conqueror inline, V-12 engine of 600 h.p. The XA-8, serial number *30-387*, was delivered to Wright Field, Ohio, the Army Air Corps' test centre, for initial flight tests in June 1931. It was joined in flight test by the XA-7 in September.

The Shrike was distinctive in that its strut and wire braced low wing featured trailing edge flaps, the first to be used on an Army Air Corps' plane, and full span, automatic, leading edge slots. Opening at high angles of attack in the 90 to 95 m.p.h. airspeed range, these enhanced the plane's low speed handling characteristics. After initial testing, the XA-8, in December 1931, underwent three months of flap control experiments and two months of rear cockpit revisions.

Evaluation of the trials at Wright Field saw the Curtiss emerge victorious, and in 1932 an order was placed for thirteen service test Shrike aircraft. The first five were designated YA-8 with V-1570C engines, serials *32-344* to *348*, and the remaining eight were ordered as Y1A-8s with V-1570F engines also of 600 h.p., serials *32-349* to *356*. Eleven of these planes, *32-345* to *355*, joined the 3rd Attack Group at its base in Fort Crockett, Texas during 1932 and served alongside the unit's Curtiss A-3B's into 1934.

The last Y1A-8, *32-356*, was re-engined at the factory prior to acceptance and, with a geared GIV-1570F Conqueror, delivered to Wright Field for tests as a Y1A-8A in October 1932. It later joined the 3rd Attack Group also, joining that unit's establishment in September 1933.

The first of the YA-8s, *32-344*, was also modified, and it led the way to the A-12 Shrike. Delivered to Wright Field in July 1932 it underwent three weeks of initial performance tests and was then returned to the Curtiss factory at Buffalo, New York for modification. The major change was the installation of a Pratt & Whitney R-1690D, 9 cylinder, radial engine of 630 h.p. With the new powerplant, the plane went back to Wright Field for testing as the XYA-10 on 8th September, 1932.

Flight testing of the radial-engined Shrike was carried out within three weeks and indicated a most successful combination. On 6th December 1932, the airplane was sent to Fort Crockett for service testing. There it was assigned to the 13th Attack Squadron of the 3rd Group. Wearing the normal Olive Drab and Yellow finish of the time, it carried the squadron insignia on the sides of the fuselage amidships and its white aircraft number, "63", on the sides of the rear fuselage.

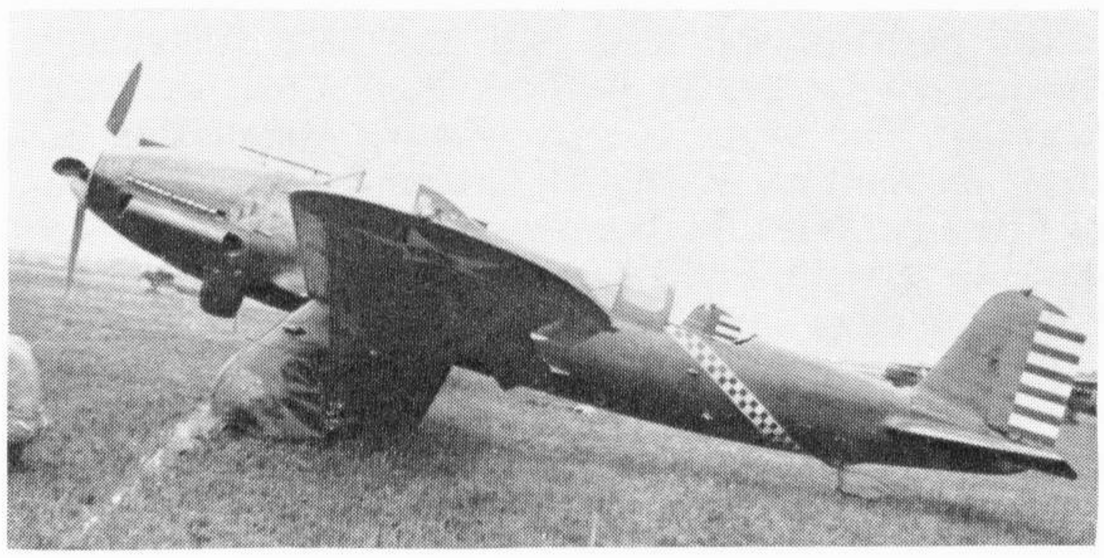
Subsequently, the YA-10 was transferred to Barksdale Field, Louisiana in July 1934 (with the A-8s), had its squadron markings removed, and was given the aircraft number "120". On 29th April 1934, it went to the San Antonio Air Depot and then was assigned to the Command and General Staff College (whose insignia it carried) at Fort Leavenworth, Kansas on 8th August 1934. After November 1936 it was aircraft "7", with the then standard Blue and Yellow aircraft finish, and had a red and yellow checkerboard cowling.

On 18th April 1937, still at Fort Leavenworth, it was aircraft "20" with a new checkerboard design on the cowl and also a similar design on the wheel covers. The wheel fairings were often removed to prevent mud packing up on the wheels and forcing them to suddenly lock and nose the plane over. The A-10 was finally assigned to Chanute Field, Illinois on 14th September 1938 and was surveyed there (scrapped) on 23rd February 1939, having compiled a total of 2,119 flying hours during its lifetime.

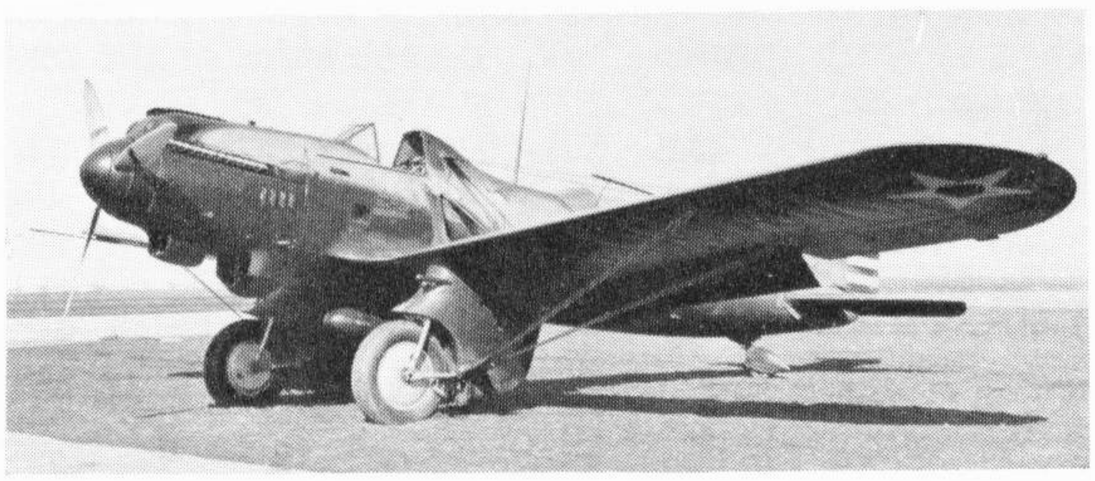
One other Shrike, similar to the YA-10, appeared. It was the Curtiss XS2C-1. This airplane was actually

*Curtiss Y1A-8 of the 13th Attack Squadron. Aircraft number, "60", is atop spinner and on rear fuselage.*
(Photo: Robert T. O'Dell)

constructed from parts ordered on two different U.S. Navy contracts. One contract called for the wings and landing gear (and the tail) to test the high lift advantages of the slot and flap-equipped Shrike wing, and the second contract called for the fuselage and engine—a Wright R-1520-28, 9 cylinder radial of 625 h.p. The resultant XS2C-1, Bureau Serial Number *9377*, was delivered to the Navy for testing in 1933, but no further development of the design was undertaken and no orders were forthcoming.

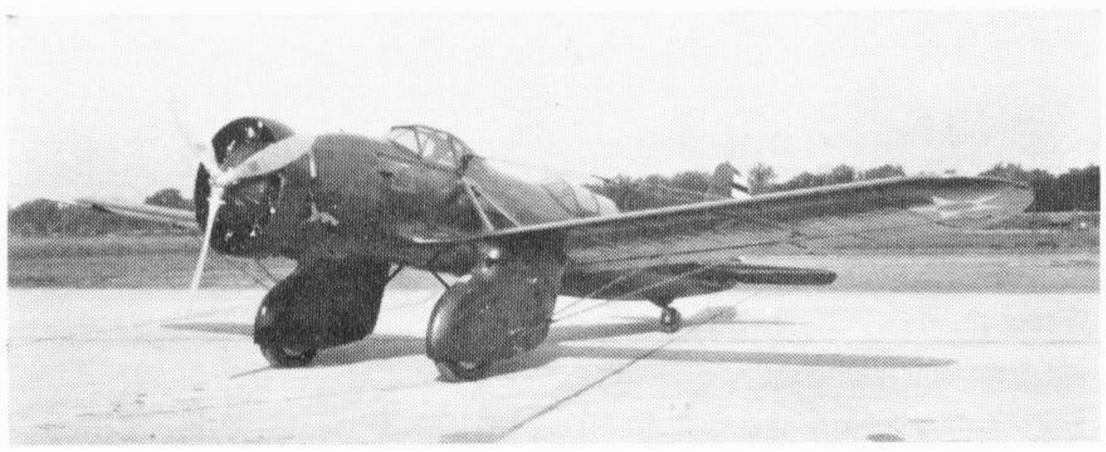


*Curtiss A-8A, 32-356, in the markings of the 37th Attack Squadron, 8th Pursuit Group of Langley Field, Virginia.*
(Photo: J. Raymond Pritchard, Jr.)



*Curtiss Y1A-8, 32-350, with wheel fairings removed and carrying auxilliary fuel tank with plane's serial number stencilled to it.* (Photo: Gordon S. Williams)

*Curtiss XYA-10 with 630 h.p. Pratt & Whitney radial engine at Wright Field for testing in September 1932.*
(Photo: U.S. Air Force)



## SHRIKE CONSTRUCTION

Based on the improved performance of the Hornet powered YA-10, the Army Air Corps ordered 46 production A-12 Shrikes in 1933. This was enough to fully equip the 3rd Attack Group and, in effect, make it the most modern unit of its type in the world. The A-12s, *33-212* to *257*, were similar in construction to the early A-8s with the exception of the radial engine, a Wright YR-1820-21 of 670 h.p., and the movement of the observer's cockpit forward to share a common location with the pilot's cockpit. The former had a sliding canopy which did not fully enclose it, while the pilot's cockpit had only a windshield. Propeller installation was a nine foot diameter, three blade, ground adjustable unit with aluminium blades mounted in a steel hub.

Fuselage construction was in two main parts. The forward section, from just ahead of the observer's position, was of welded tubular steel construction with two wing stubs supported by two heavy struts on each side. The rear section was of monocoque construction with smooth dural skin, J section stringers and bulkheads. The two sections were joined by longeron stubs of the tubular section telescoping into U channels of the rear section and being secured by five $\frac{5}{16}$ inch bolts at each of the four joints. The engine mount was a separate unit, attached to the forward section by four taper pins.

The landing gear was attached to the underside of the wing stubs with the rigid portion bolted to the under side of the front and rear wing hinge fittings and braced sideways by an adjustable streamline strut running to the centre of the fuselage. The 31 inch streamline wheel was held by a horizontal jointed yoke, hinged at the rear to allow the wheel to move up and down. Landing shocks were absorbed by an oleo strut, forked around the wheel. Each landing gear and wheel were completely faired, or spatted. It was possible to latch the wheels before take-off so that they would not drop down the last 6 inches of their travel while in the air. They were lowered by the pilot before landing so that the full 10 inch wheel motion was available to absorb landing shock.

Wings were attached to the fuselage wing stub by front and rear hinge pins. They were braced at outboard points by double front and rear landing wires running to a pyramid on top of the fuselage behind the pilot's cockpit and by double front and rear flying wires to the landing gear. Leading edge slots operated on ball bearing rollers and opened automatically at high angles of attack. They were

equipped with shock absorbers to prevent their opening or closing too suddenly. Trailing edge flaps were actuated and connected by horns and were cranked down, to as much as 35°, by the pilot. Wing beams were built up of rolled duralumin sheet and the surfaces were metal covered. Ailerons were of metal construction with fabric covering and had a ground adjustable trim tab on the trailing edge.

Tail surfaces were of all metal construction with the rudder and elevators being fabric covered. The angle of attack of the stabilizer was adjustable in flight, from +3° to —6°. The vertical stabilizer was fixed with an offset of $2\frac{1}{2}$° to the left. A rudder trim tab was controllable from the cockpit.

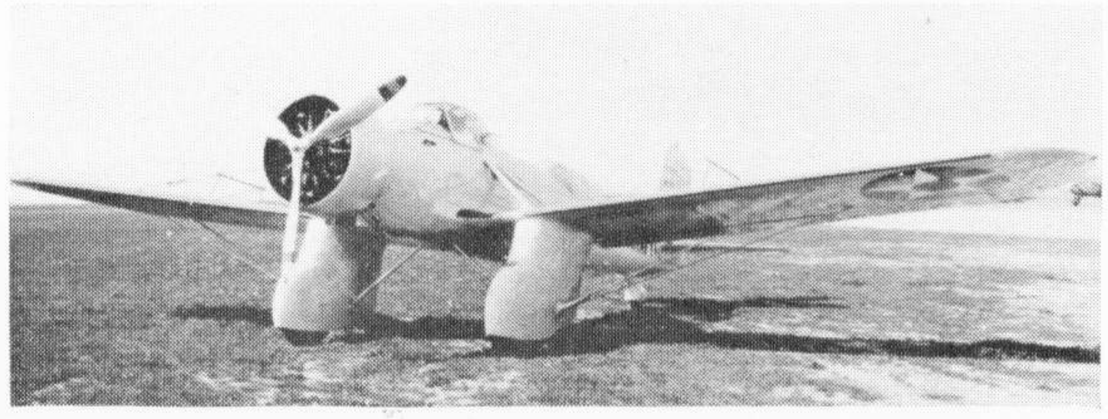
A hand crank to the left of the pilot operated both the stabilizer adjustment and flap control, either together or separately. This was accomplished through a three position selector handle. With the selector inboard the crank operated the flaps only, with it centred it operated flaps and stabilizer together (which was normal for landing), and with it outboard it operated the stabilizer only.

Main armament for the Shrike consisted of four ·30 calibre Browning machine guns mounted in the landing gear. There were two 1918 M-1 guns on the right hand side of the plane and two M-2 guns on the left hand side. The guns were mounted about 24 inches above the wheel, one atop the other and slightly offset with the lower gun to the outside. Each gun was supplied by a detachable stainless steel ammunition box of 600 rounds capacity. A C-4 gunsight could be mounted just forward of the pilot's windshield. Two sets of sight sockets, one slightly to the right and the other slightly to the left of the airplane's centreline, gave the pilot the choice of using either his right or left eye for sighting.

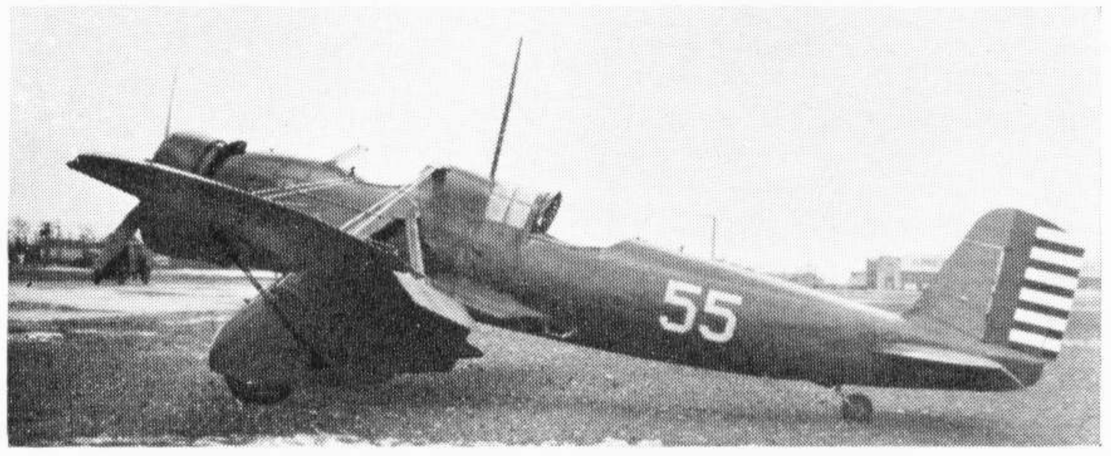
A single ·30 calibre 1918 M-1 machine gun was mounted flexibly for the observer. Five saddle-type ammunition magazines were racked in a holder aft and below the gun mount, and a sixth could be carried on the gun. Each magazine contained 100 rounds.

Each Shrike was equipped to carry ten 30-pound bombs (usually fragmentation bombs) internally in a pair of N-2 bomb racks just aft of the pilot's seat and on either side of the main fuel tank. Below the racks were chutes to steady the bombs and guide them after release and until they fell clear of the plane. The bombs were carried in a vertical position. When released they struck the doors at the lower ends of the chutes causing them to open, and then spring hinges snapped the doors closed after the bombs had fallen free.

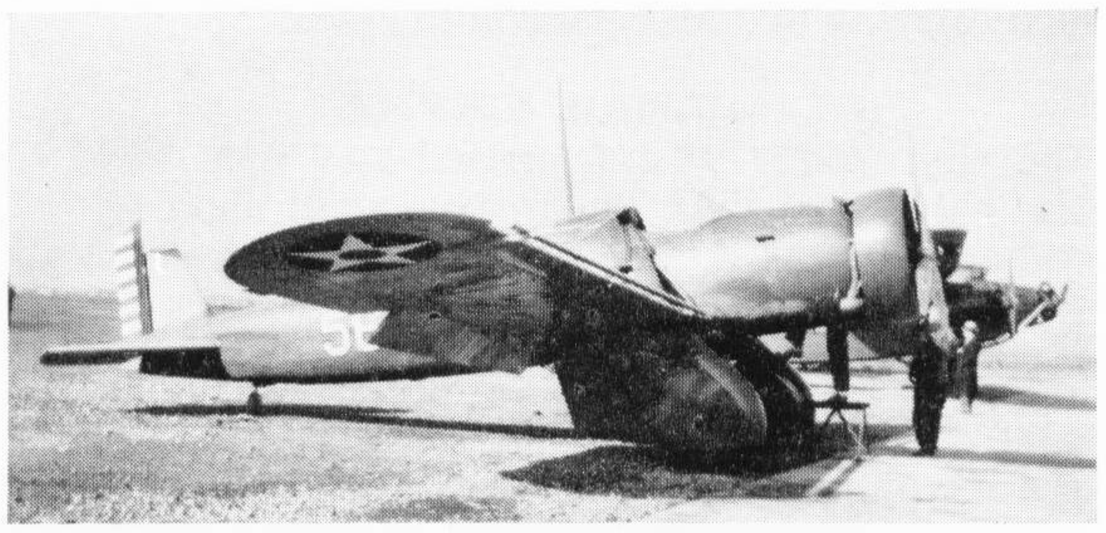
Alternately, a P-1 external rack could be mounted to the lower main fuel tank cradle. It was capable of handling four 100-pound demolition or four 50-pound chemical bombs, and could also mount a smoke tank for laying smoke screens. Where range was desired, a 52-gallon auxiliary fuel tank could be carried on bomb shackles in place of the weapons. It could be



*Curtiss XS2C-1, Bureau Number 9377, during testing by the U.S. Navy in 1933.* (Photo: Peter M. Bowers Collection)

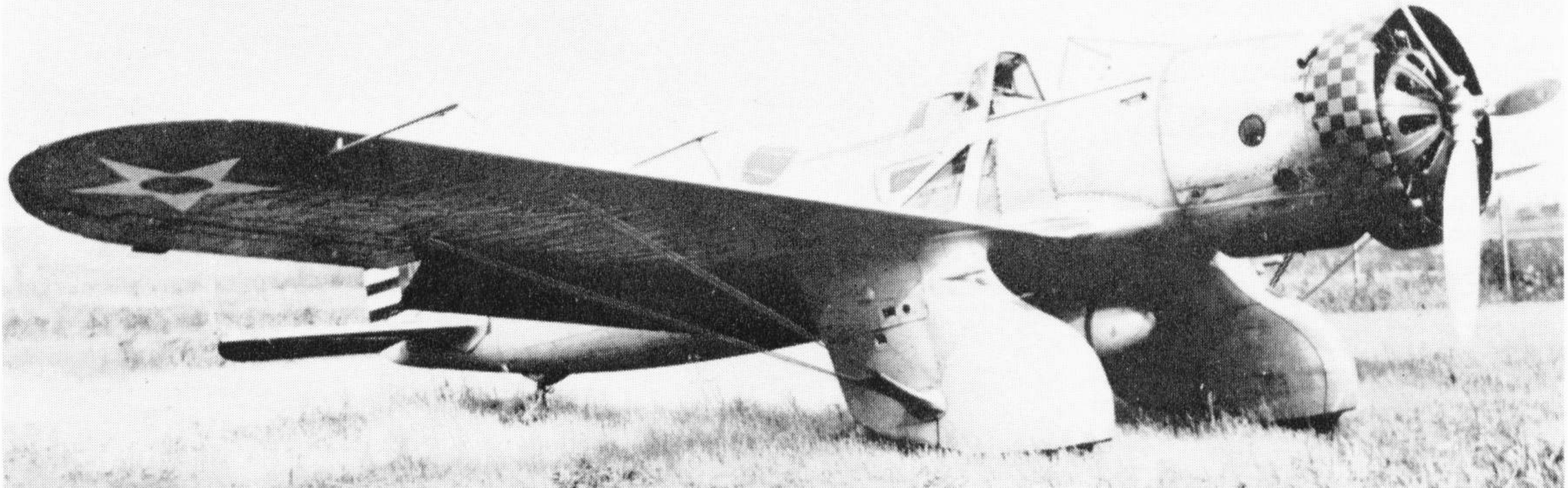


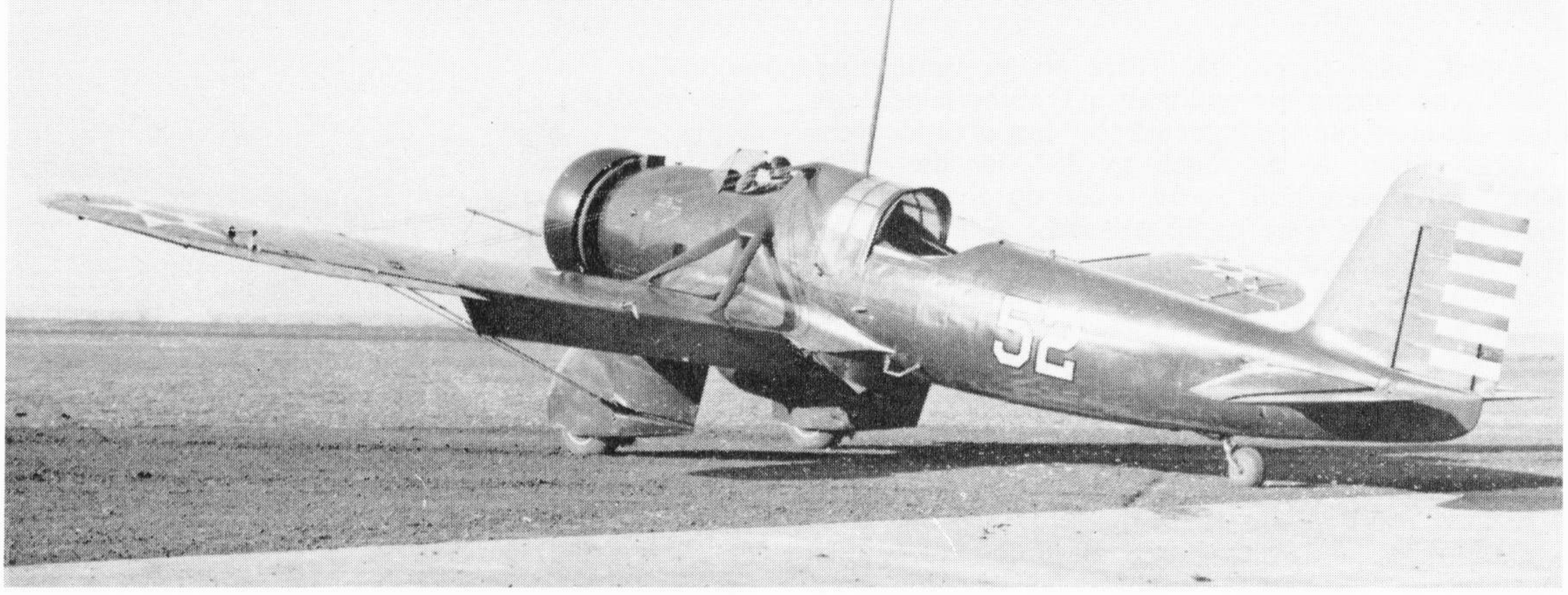

*Curtiss A-12 after joining the 3rd Attack Group. This is serial number 33-220 as seen on 22nd February 1934.*
(Photo: Robert Esposito Collection)



*Aircraft "56" soon after it joined the 3rd Attack Group in Texas.* (Photo: Merle Olmsted Collection)

*The Curtiss YA-10, 32-344, as it appeared while serving the Command and General Staff College at Fort Leavenworth, Kansas. It was number "7" during 1936.* (Photo: Fred C. Dickey, Jr.)





*3rd Attack Group A-12 being readied for takeoff in early 1934.* (Photo: Peter M. Bowers Collection)

dropped by moving the bomb control to the salvo position. In fact, the main fuel tank could also be jettisoned in flight, by means of a special release handle, which dropped it, and the P-1 rack if attached. Just aft of the observer's cockpit there was an internal rack carrying two M-8 parachute flares.

## AIRMAIL SERVICE

The first A-12, *33-212*, arrived at Wright Field on 21st November 1933, underwent initial flight testing, and remained at Wright until it was surveyed on 8th October 1936 with 312 flying hours. The second plane, *33-213* was delivered to the Edgewood Arsenal, Maryland on 23rd November, and the third, *33-214*, went to Aberdeen, Maryland on 29th November. The remaining 43 Shrikes were delivered to the 3rd Attack Group at Fort Crockett as regular equipment between 14th December 1933 (*33-215*) and 20th February 1934 (*33-256*).

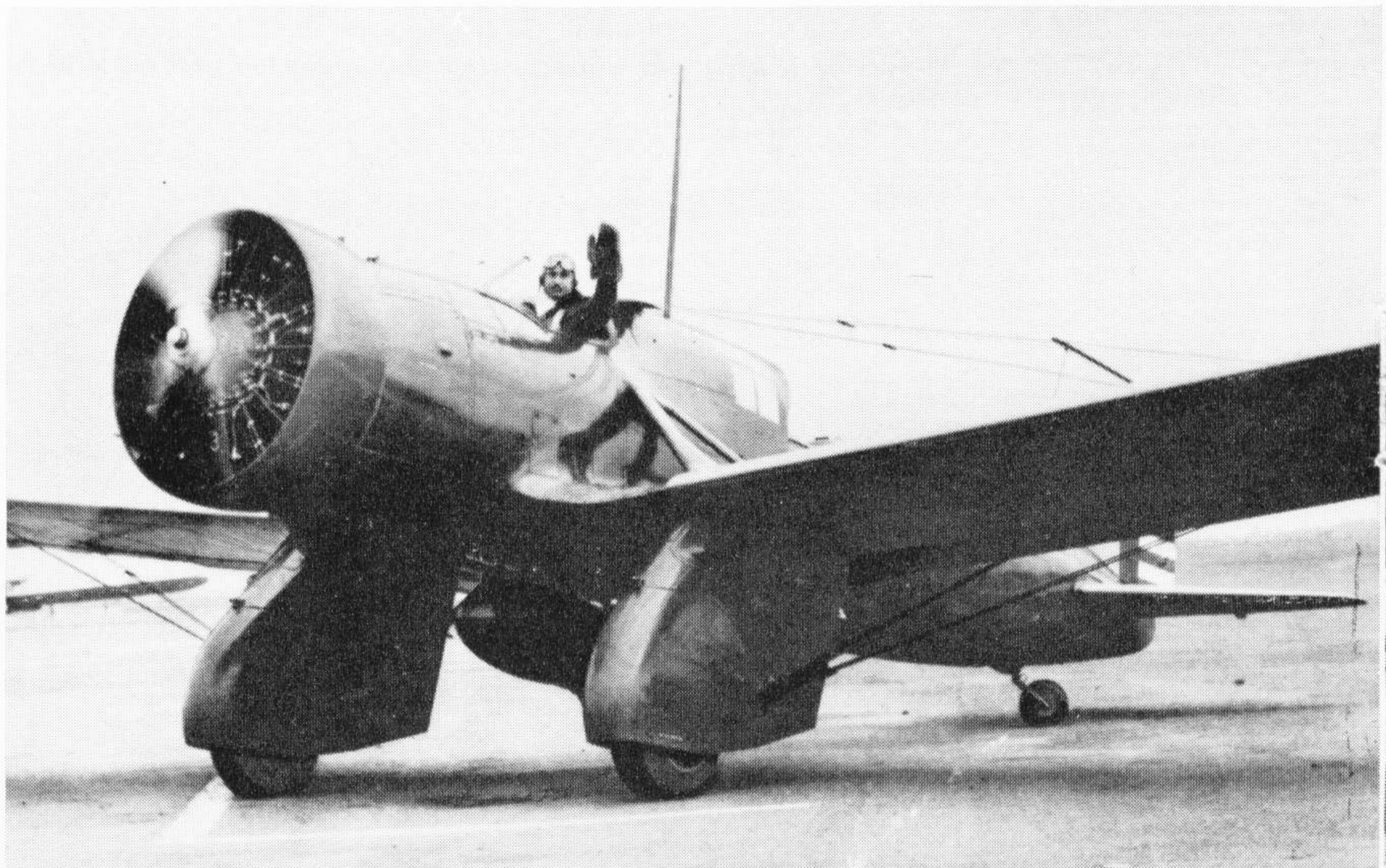
When the brand new, Olive Drab and Yellow A-12s arrived, they were probably allotted to squadrons where a half dozen or so were given white aircraft numbers, some outlined in black, in the 50s (*33-220* was "55" and two between *33-215* and *219* were "51" and "52"). It would seem that these planes were assigned to the 13th Attack Squadron, but no squadron insignia was carried.

Two A-12s were washed out soon after joining the 3rd Group. Aircraft *33-240* was totally destroyed in a wreck at Athol, Massachusetts on 20th January 1934, and *33-243* made a forced landing in a swamp at Bentonville, Mississippi on 28th February 1934 and was surveyed during November.

In February 1934, the U.S. government cancelled all airmail contracts with private operators and handed the responsibility of carrying the airmail to the Air Corps. Unprepared for such a major task, the Air Corps did its best, dividing the country into a Western, Central and Eastern Zone and assigning its best planes and the crews of its units to the three zones. Lt. Col. Horace M. Hickam, commander of the 3rd Attack Group, was put in charge of the Central Zone with headquarters at Chicago, Illinois.

All in all, 41 Curtiss A-12s from the 3rd Group were assigned to the Central Zone (with six being briefly assigned to the Western Zone), plus the two A-12s from Aberdeen and Edgewood. They aided in flying the mail until May 1934 when new contracts were signed with domestic carriers. During their mail use, the rear cockpits of the Shrikes had a lockable cover over them, and some replaced the rear cockpit glass with metal. Two A-12s were lost while carrying the mail. Aircraft *33-244* stalled and crashed in bad weather at Oakley, Utah on 16th February 1934 killing its two man crew, including the pilot, 2nd Lt. Jean D. Grenier, for whom Grenier Air Force Base, New Hampshire was named; and *33-246* crashed at Clinton, Iowa on 30th March killing 2nd Lt. J. A. Ward.

Most of the A-12s returned to Fort Crockett in May 1934 (four returned in June and one, *33-257* damaged on 2nd April at Cheyenne, in November). Although some of the planes had carried numbers before, henceforth all A-12s assigned to squadrons of the 3rd Attack Group were given aircraft numbers which were the same as the last two digits of their serial number and were placed on the sides of the cowl. Allocation of numbers to squadrons (approximate) was made during 1934 with 17 to 29 going to the 13th,



*A-12 assigned to Air Mail service, 33-225, is seen in San Francisco on 19th February 1934. Number "3" is visible within cowl.* (Photo: A.A.H.S.)

*Shrike of the 13th Attack Squadron, 33-222, flying at normal cruising altitude.* (Photo: U.S. Army Air Corps)

30 to 41 to the 8th, and 42 to 56 to the 90th Squadron. One exception was "48", allocated to the 13th.

By the end of 1934, all squadron A-12s had bands painted on the fuselage, down and aft from the observer's cockpit. These were in the squadron colour and had one or two stripes of a contrasting colour within them to identify such aircraft as those of the flight and squadron commanders. The band, when only in the squadron colour and with a contrasting outer trim, identified other aircraft of the unit.

For the 13th Squadron, the band was white and the stripes or trim were black. For the 90th, the band was red and the stripes or trim were yellow. For the 8th, the band was yellow and the stripes or trim were blue. The cowls were also painted in the squadron colour. Aircraft numbers were retained on the sides of the cowl in a contrasting colour as well as being placed on the vertical fin in black. The squadron insignia was painted on the fuselage sides above the wing.

Besides A-12s assigned to squadrons, indications are that there were at least three belonging to Group Headquarters. It also appears that these planes were numbered in the 200s and painted with red and white stripes running down the cowl and halfway back along the fuselage. On 5th November 1934, Colonel Hickam was killed in an A-12, *33-250*, when it flipped over on its back after touching down short and hitting the lip of the concrete runway while landing at Fort Crockett. This plane was "100" and carried three variously coloured stripes on the rear fuselage.

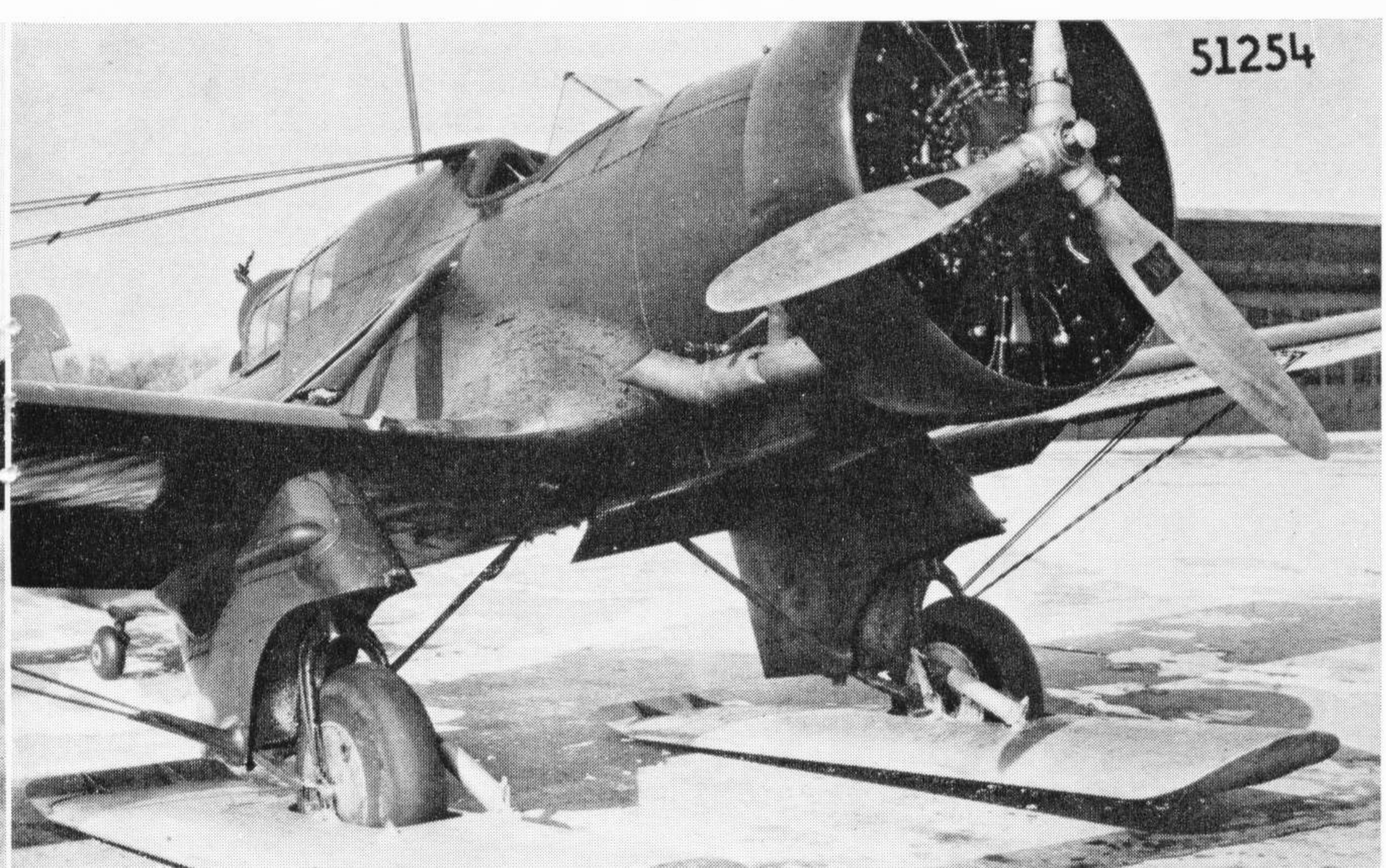
During the Winter Manoeuvers held in the north-west part of the United States in February 1935, some A-12s participated. One was *33-238* in its normal 8th Squadron markings. It also carried the Winter Manoeuvers' aircraft number "7", in black on the vertical fin in place of the regular aircraft number, and the insignia of the Winter Manoeuvers, a white polar bear, painted on the fuselage behind the cowl. The Shrike was equipped with F-1 skis.

## KILLER KANE REMEMBERS

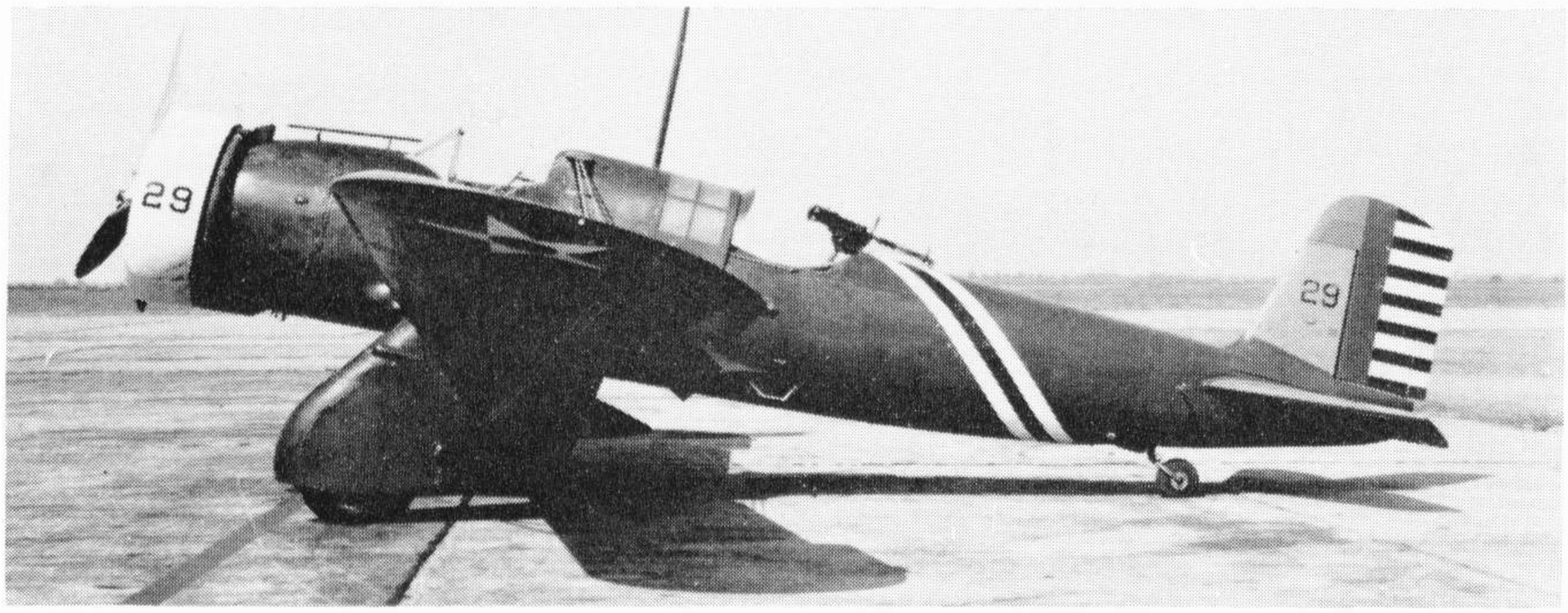
In February 1935, the 3rd Attack Group moved from Texas to the newly completed permanent base at Barksdale Field, Louisiana. There it continued to operate its A-12s until the middle of 1936 when Northrop A-17s were received to replace them. Some idea of operations during this period can be obtained from the recollections of Colonel John R. "Killer" Kane, who was to receive the Congressional Medal of Honor leading his Liberator group over Ploesti on 1st August 1943. He was a young Lieutenant at the time.

"When I joined the 3rd Attack Group in 1935 we flew Curtiss A-12s. It flew like no other plane. In a steep bank the leading edge slots popped in and out, and in landings the plane popped the eyes of new pilots, for when the throttle was cut the plane dropped like a brick. It was good in formation, however, and had good visibility.

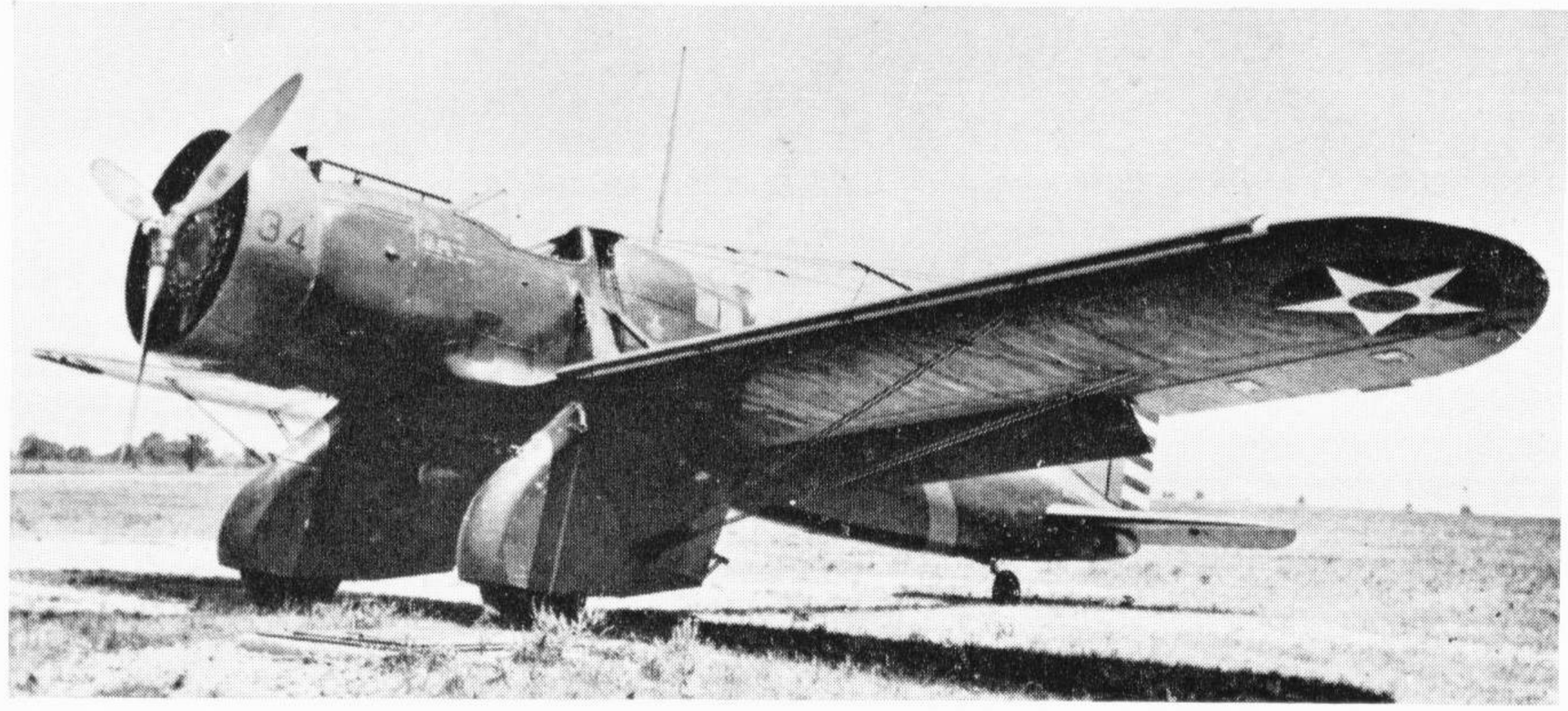
"In attack flying the formation made flat turns, that is—a line through the propeller hubs remained parallel to the horizon. This required long practice and strict flying discipline. The wingmen flew on the element leader and stayed with him even if he cracked up.




*Details of the installation of F-1 skis on a Curtiss A-12, 33-212.*
(Photo: Wright Field)



*Flexible gun mounting is displayed by flight leader plane, 33-229, of the 13th Attack Squadron.*
(Photo: Robert Esposito Collection)



*A Shrike of the 8th Attack Squadron, 33-234, at rest with leading edge slots extended.*
(Photo: L. M. Lowry)

If there was a crash, there should be three wrecks ! Night flying in formation was really a nerve jerker.

"The Group or parts of it were always doing demonstrations around the country, trying to convince the Army and the public of the value of air power. One year we went as a group to the Miami Air Races and daily put on a show of formation flying without getting out of the area of the airport. On the way to Fort Pierce, where we camped, my element leader went to sleep. We two wingmen flew with him and by changing the airflow over his wings kept him in fairly good formation. Finally the Squadron Commander made a turn, and we had to jazz our engines to wake him up.

"Major Paul L. Williams (Squadron Commander of the 90th Squadron to which Lt. Kane was assigned) was to us an old man, but from the way he flew he made our flying seem conservative. Every time we went to the Texas coastal area he really cut loose so that all the women ran for their clotheslines when they heard our planes. I still don't know whether or not he knew what a telephone line looked like or whether he ever saw one, but he headed his plane at a point midway between the posts and those of us with clear space followed him.

"Most element leaders went over (the telephone lines) with hardly a perceptible change in formation but took a chance of a sharp lecture on formation flying from the Major. I suppose I flew under many lines, but I never saw them—just the element leader. With your eyes grooved into a fixed angle with his head, and a responsive left hand on the throttle, there was no time for sight-seeing."

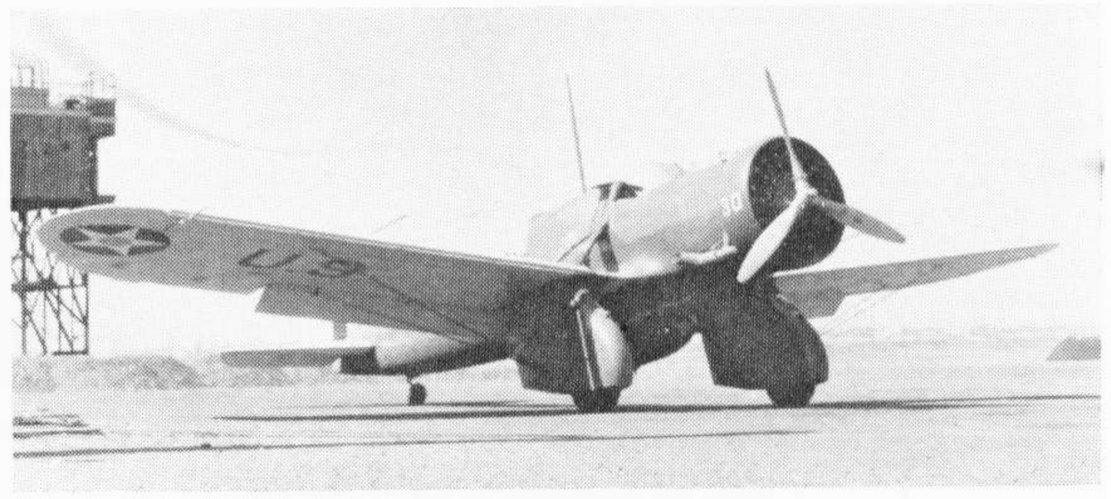
*Formation of 90th Attack Squadron Shrikes flying near Barksdale Field, Louisiana on 27th March 1935.*
(Photo: U.S. Air Force)

Subsequent to the loss of Colonel Hickam in November 1934, three more A-12s of the 3rd Attack Group were lost in accidents and crashes. Thus, when the Group converted to A-17s, there were 35 of their A-12s that were dispersed, most going through a depot for complete overhaul first, to four different bases by the end of 1936. A number of these aircraft were modified at the depots, having the upper decking, directly behind the pilot's cockpit, raised to protect the pilot in case the plane turned over on landing. This modification also raised the pyramid point of landing wire attachment.

Nine A-12s went to the Air Corps Tactical School at Maxwell Field, Alabama. In Blue and Yellow finish they carried large white aircraft numbers, with black trim, in the 20s and 30s on the rear fuselage and cowl sides. The Tactical School insignia was applied to the sides of the fuselage forward of the pilot's cockpit. One A-12 was assigned to the Edgewood Arsenal, replacing *33-213* which went into a depot. Ten went to Kelly Field, Texas to serve in training new pilots in advanced flying.

During 1937, five more A-12s came to serve at Kelly Field—four from Maxwell Field and one, *33-214*, from Aberdeen. The latter, from May to November 1935, had been assigned to the 37th Attack Squadron of the 8th Pursuit Group at Langley Field, Virginia—the only attack squadron on the east coast of the United States. It served with the 37th's A-8 Shrikes and then returned to Aberdeen.

All of the Kelly Field Shrikes were the standard Blue and Yellow Army Air Corps' finish. Aircraft numbers from 73 to 86, and also number 60, were painted on the sides of the nose just aft of the cowl. In many cases these planes flew without wheel fairings.



*Shrike of the 8th Attack Squadron, 33-230, with squadron emblem visible above wing and between cockpits.*
(Photo: Peter M. Bowers Collection)

## SHRIKES IN THE ISLANDS

Fifteen of the 3rd Group's A-12s went to Hawaii in 1936 and were followed by an additional six in 1937, including *33-213* which had been at Edgewood and five from Maxwell. They equipped the 26th Attack Squadron (a part of the 18th Composite Group which also had two pursuit squadrons) at Wheeler Field. The squadron insignia was carried on both sides of the Blue fuselage over the Yellow wings.

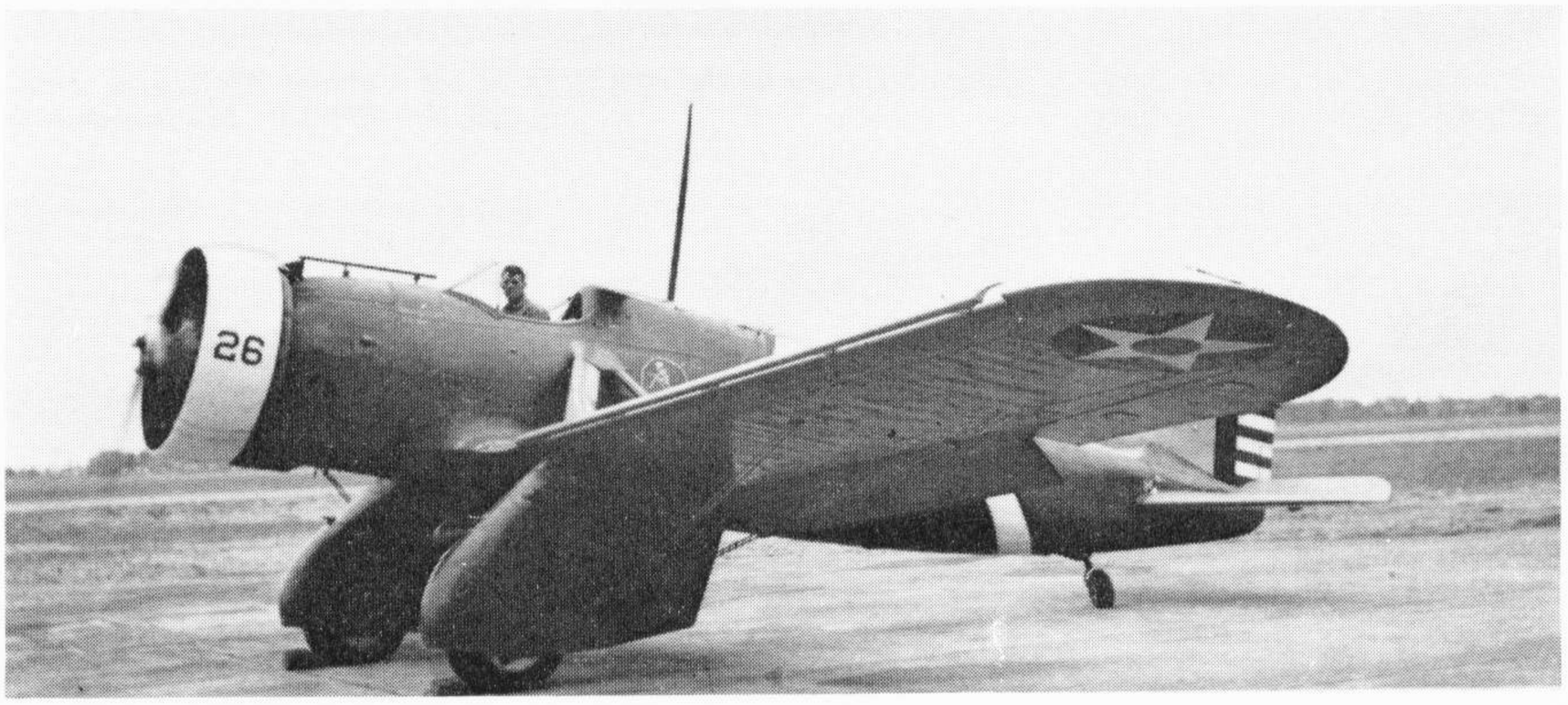
At first, the Island Shrikes had three digit aircraft numbers in black on the cowl and vertical fin and carried fuselage stripes very similar to those that had been used by the 3rd Attack Group. By 1938 the rear fuselage stripes had disappeared, and the planes bore black numbers in the 70s, 80s and into the 90s on the cowl and vertical fin. Aircraft *33-215* was number "92".

About January 1939, these planes began using the new designator unit letters "AR" (A—for Attack, R—for the 18th Composite Group) and aircraft numbers running from "50" into the high 60s. In black, the designator letters and aircraft number were carried on the vertical fin and the number only on the side of the cowl.

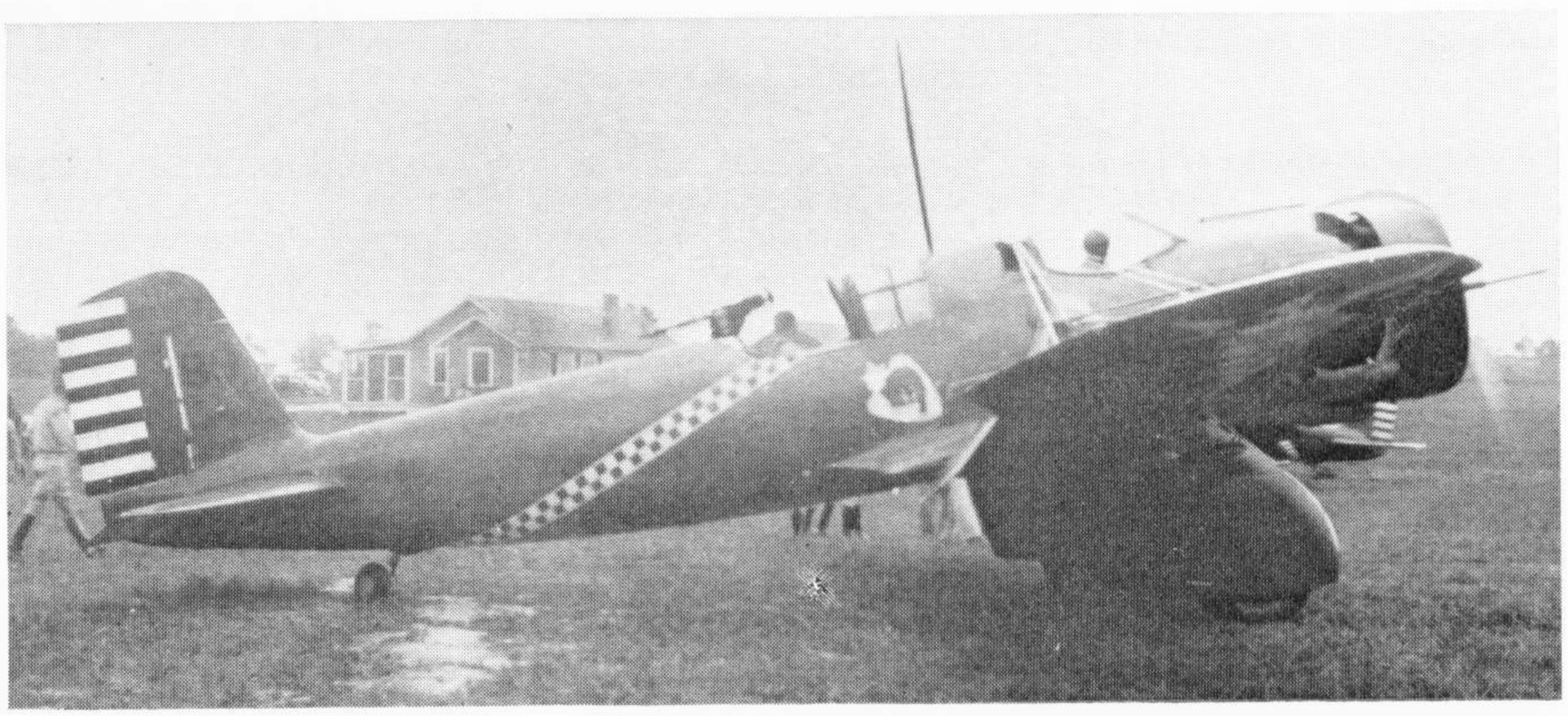
Flying Shrikes in the Islands in 1938 and 1939 was not without its colourful moments. To ease the boredom of straight formation flying, it became a practice for a pilot not to land back at the field without have his wing tip signed ! This signing was accomplised by each plane, in turn, flying in close to his wingman. The pilot then dipped one wing down so that the observer in the other plane could reach up and sign his name on the proffered wing tip !

For night flying, the Shrikes carried obsolete flares in their bomb racks which were to be used for night landing practice. On one occasion, however, a pilot quite forgot himself and discharged one of his two regular, and new, flares to light the landing area. When this was learned by the commanding officer, the pilot was nearly court martialled for wasting valuable government property.

The A-12s remaining at Wheeler Field in 1940 began to be transferred to units at Hickam Field, Hawaii, and nine were still in the Islands when Pearl Harbour was attacked on 7th December 1941. Of these last nine, one was surveyed in May 1942, and eight were returned to the U.S. where they became instructional airframes between April and September 1942, being turned over to various schools. The last was *33-227* which became an instructional airframe




*Turning over the engine on 33-226, another Shrike of the 13th Attack Squadron.*
(Photo: Roger F. Besecker



*The single A-12 Shrike assigned to the 37th Attack Squadron, 33-214, as it appeared in mid-1935 while on manoeuvres.*
(Photo: J. Raymond Protchard, Jr.)

*Camouflaged Shrikes of the 26th Attack Squadron during Island manoeuvres, 1938/39.* (Photo: Fred C. Dickey, Jr.)

at Chanute Field on 15th September with 2,029 flying hours.

Of the 16 A-12s that stayed in the United States in 1937, one, *33-237*, remained at Edgewood until surveyed in January 1942. The other 15 were at Kelly Field where three were surveyed in 1937 and 1938. The 12 remaining A-12s were then sent to Maxwell Field during 1938 and remained there until removed from service. The last two, *33-223* and *33-252* became instructional airframes on 16th March 1942 with 2,443 and 2,783 flying hours respectively.

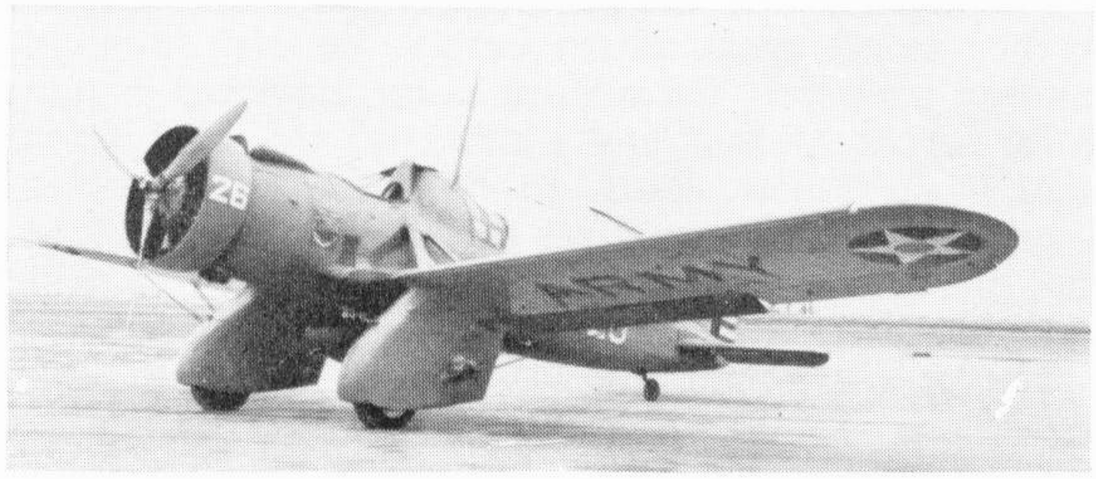
During their last years at Maxwell, these planes carried aircraft numbers in the 80s on the fuselage sides and cowlings, and at least one was painted overall aluminium to conform to 1941 rulings pertaining to the painting of old aircraft.

The following chart shows where the A-12s were at given periods during their service life, beginning with their airmail service and following the loss of the first two at Fort Crockett.

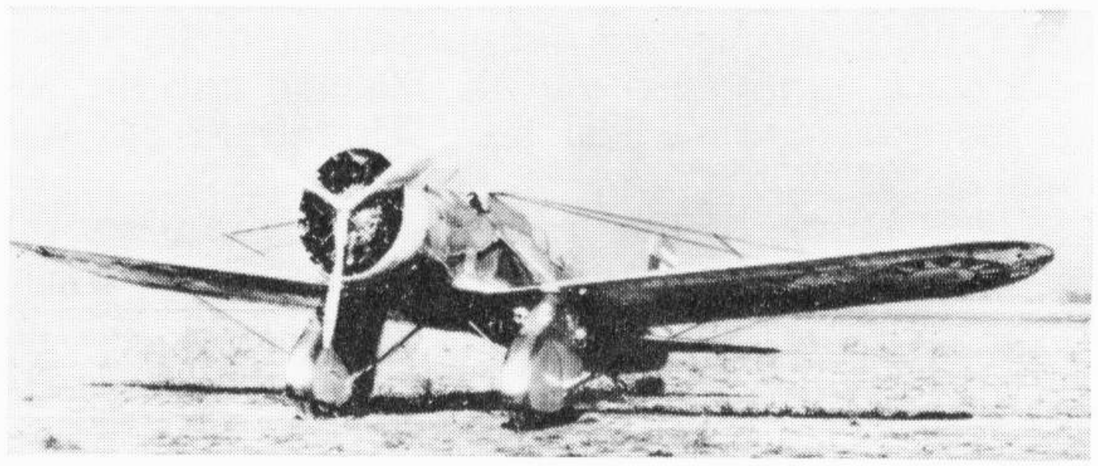
| Assignment or Station | Mar. '34 | May '34 | Feb. '35 | Dec. '35 | Dec. '36 | Dec. '37 | Dec. '38 | Dec. '39 | Dec. '40 |
|---|---|---|---|---|---|---|---|---|---|
| Aberdeen | | | 1 | 1 | 1 | | | | |
| Edgewood | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Wright | 1 | 1 | 1 | 1 | | | | | |
| Depot | | 2 | 2 | 1 | 1 | | | | |
| Central Zone | 43 | 4 | | | | | | | |
| Ft. Crockett | | 35 | 5 | | | | | | |
| Barksdale | | | 31 | 37 | | | | | |
| Maxwell | | | | | 9 | | 12 | 11 | 10 |
| Kelly | | | | | 10 | 15 | | | |
| Wheeler | | | | | 15 | 21 | 20 | 17 | 6 |
| Hickam | | | | | | | | | 4 |
| TOTAL | 44 | 42 | 41 | 41 | 37 | 37 | 33 | 29 | 21 |

## CHINESE SHRIKES

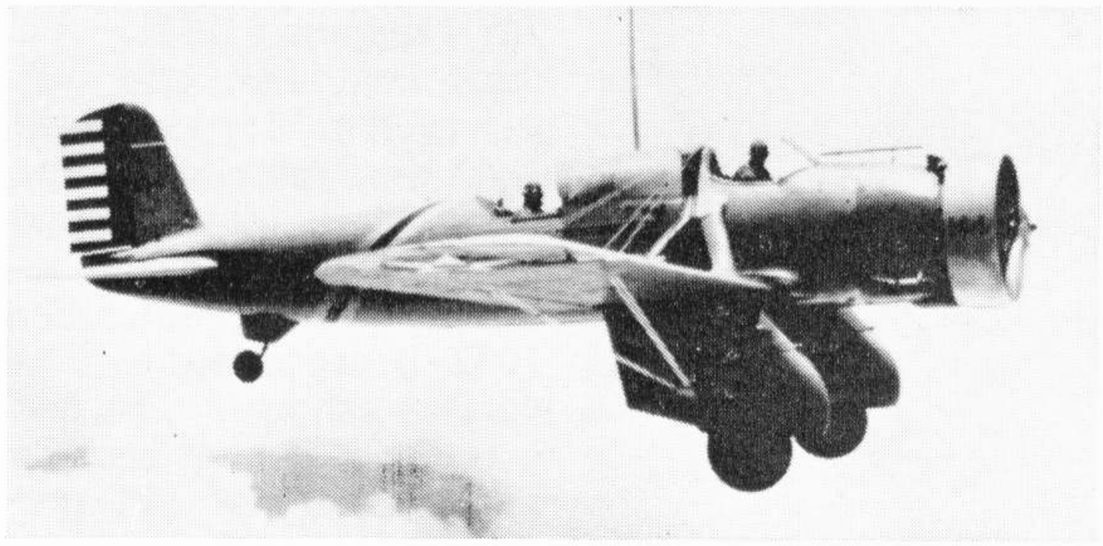
Following the completion of the U.S. Army contract for A-12s, the Curtiss Company developed an export version of the Shrike which was similar in all respects



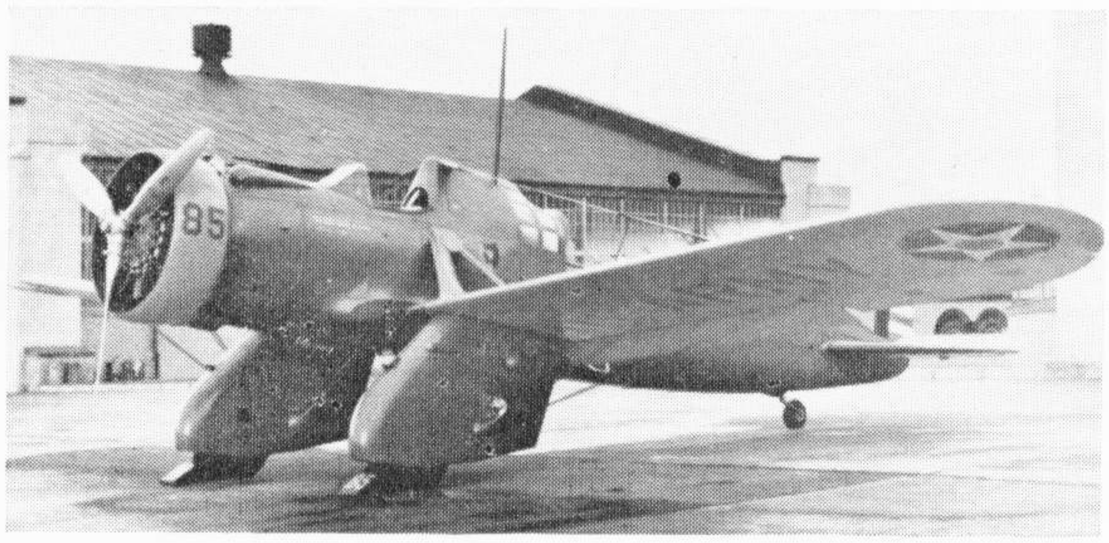
*Shrike, 33-238, as it appeared in the markings of the Air Corps Tactical School in 1936.* (Photo: William T. Larkins)



*Export Shrike in the markings of the Chinese Air Force, 1936.* (Photo: Manufacturer)

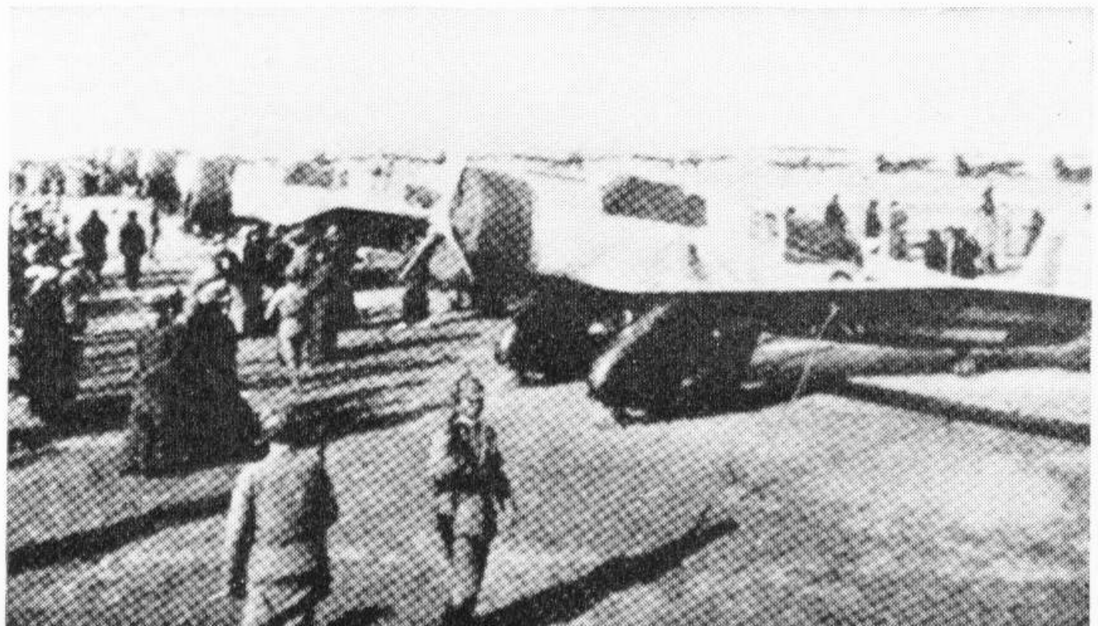


*Shrike of the 26th Attack Squadron in the earlier markings used on A-12s in the Hawaiian Islands.* (Photo: U.S. Air Force)

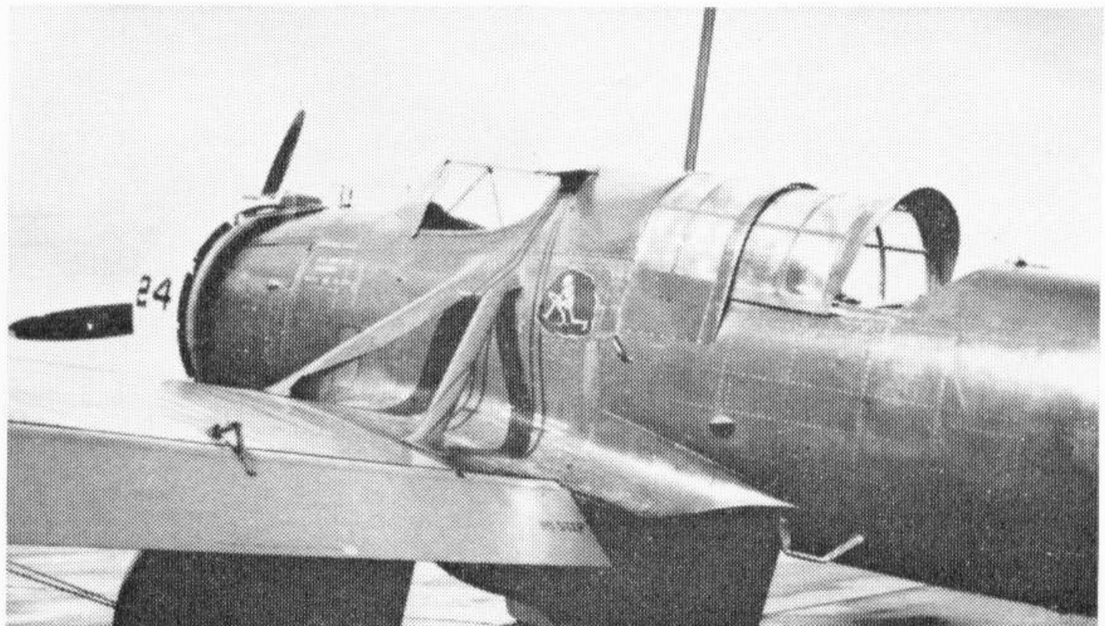


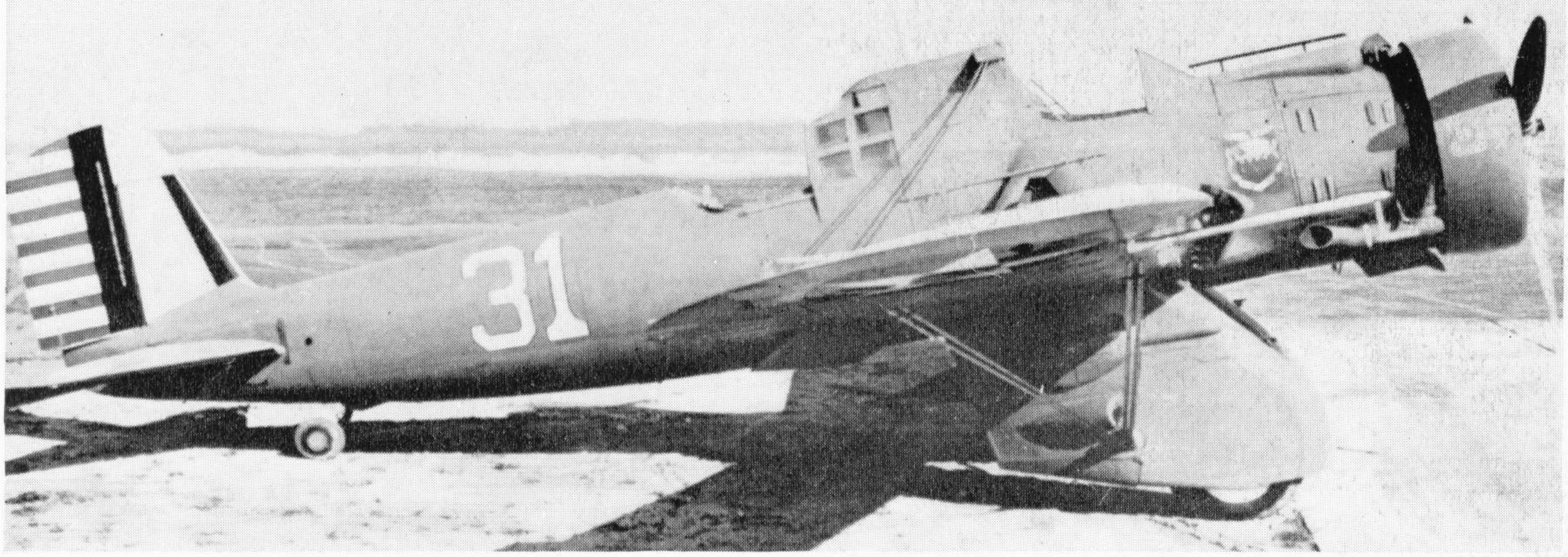
*A-12, 33-251, of the 26th Attack Squadron, coded AR 85, at Wheeler Field in 1939.* (Photo: Col. Robert H. Stuart)

*Rare photo of Shrikes in service in China and probably taken in early 1937.* (Photo: Curtesy of Richard M. Bueschel)

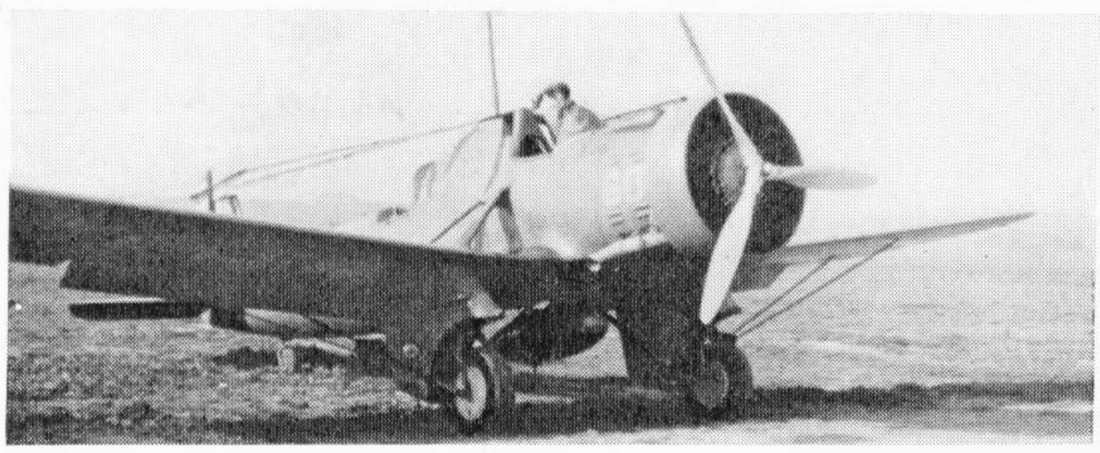


*Cockpit and flap detail of Shrike, 33-224.* (Photo: Gordon S. Williams)

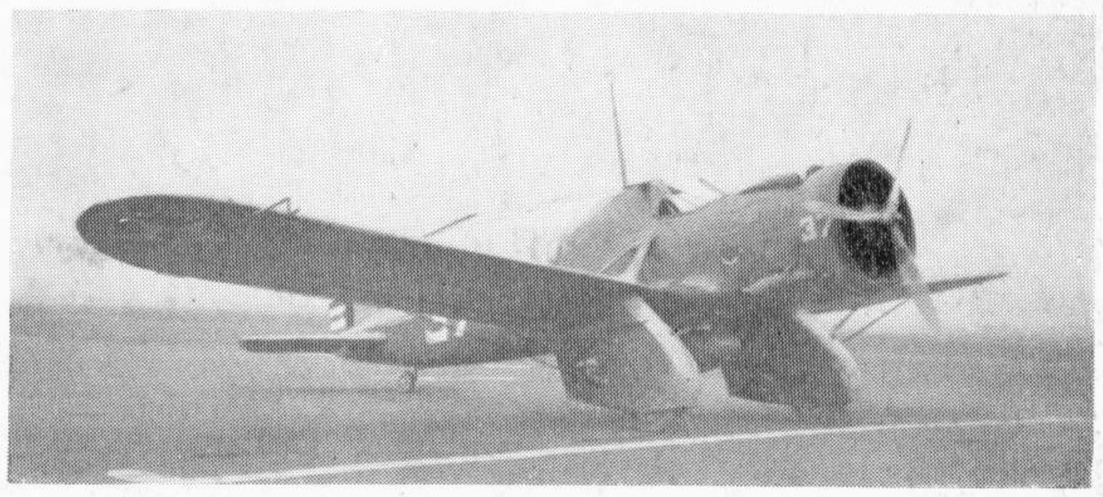





*Tactical School Shrike with slots, flaps and stabilizer in normal landing positions.* (Photo: Fred C. Dickey, Jr.)



*Curtiss A-12 Shrike being used for advanced training at Kelly Field, Texas in 1937/38.* (Photo: Gene Risedorph Collection)



*Another Shrike of the Air Corps Tactical School with the upper decking behind pilot's cockpit raised.* (Photo: Douglas Olson)

to the A-12. They sought markets for the Shrike in several different rôles, including Two Place Observation Monoplane, Two Place Attack Monoplane and Two Place Light Bomber. In 1936, ten Shrikes were sold to China and shipped there by sea.

The Shrikes for China were assembled at Hangchow and demonstrated both there and at Nanking. Results of the demonstrations were so good that ten additional machines were ordered. All of these Shrikes were designed for the attack mission, and the responsibility of training the Chinese pilots in the use of the plane fell to Luke Williamson. He was a former Army Air Corps' pilot serving with the American Mission in China.

Only major variation of the Export Shrike, as it was called in China, from the A-12 was a more powerful engine, a Wright SF-1820F-52 developing 775 h.p. at full throttle and 890 h.p. for take-off. Armament and fuel capacity were the same as the A-12, but there was an additional 74 pounds of camera equipment.

When the Japanese opened hostilities with China in 1937, these aircraft were soon embroiled in the action. Few if any of them survived the opening year of war.

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**CURTISS SHRIKE SPECIFICATIONS**

| | XA-8 | YA-8 | YA-10 | A-12 | Export Shrike |
|---|---|---|---|---|---|
| *Powerplant* ... ... | 600 h.p. Curtiss V-1570C at 2,400 r.p.m. | 600 h.p. Curtiss V-1570E at 2,400 r.p.m. | 630 h.p. Pratt & Whitney R-1690D at 2,000 r.p.m. | 670 h.p. Wright YR-1820-21 at 1,900 r.p.m. | 775 h.p. Wright SR-1820F-52 at 2,100 r.p.m. |
| *Fuel Capacity* ... | 96·3 U.S. gal. | 104 U.S. gal. | 104 U.S. gal. | 114 U.S. gal. | 114 U.S. gal. |
| *Dimensions:* | | | | | |
| Wing Span ... | 44 ft. 0 in. | 44 ft. 0 in. | 44 ft. 0 in. | 44 ft. 0 in. | 44 ft 0 in. |
| Length ... ... | 32 ft. 8 in. | 32 ft. 0 in. | 32 ft. 0 in. | 32 ft. 3 in. | 31 ft. 5 in. |
| Height ... ... | 9 ft. 0 in. | 9 ft. 0 in. | 9 ft. 0 in. | 9 ft. 4 in. | 9 ft. 4 in. |
| Wing Area ... | 256 sq. ft. | 256 sq. ft. | 256 sq. ft. | 284·5 sq. ft. | 284·5 sq. ft. |
| *Weights:* | | | | | |
| Empty ... ... | 3,672 lbs. | 3,910 lbs. | 3,727 lbs. | 3,898 lbs. | 4,024 lbs. |
| Loaded ... ... | 5,400 lbs. | 5,888 lbs. | 5,540 lbs. | 5,736 lbs. | 5,925 lbs. |
| *Performance:* | | | | | |
| Max. Speed ... | 196·8 m.p.h. SL | 183·0 m.p.h. SL | 173·5 m.p.h. SL | 176·7 m.p.h. SL | 182·3 m.p.h. SL |
| Cruising Speed ... | 167 m.p.h. SL | 153 m.p.h. SL | 147·6 m.p.h. SL | 151 m.p.h. SL | 171 m.p.h. at 6,800 ft. |
| Stalling Speed ... | 62 m.p.h. | 64 m.p.h. | 66·5 m.p.h. | 67 m.p.h. * | 67·9 m.p.h. |
| Initial Climb ... | 1,265 f.p.m. | 1,325 f.p.m. | — | 1,170 f.p.m. | 1,600 f.p.m. * |
| Service Ceiling ... | 19,800 ft. | 18,100 ft. | — | 15,150 ft. | 20,700 ft. |
| Range ... ... | 472 miles | 480 miles | — | 450 miles | 481 miles |

*Armament:* Four ·30 calibre machine guns mounted in landing gear, and one ·30 calibre flexible machine gun in observer's cockpit. Bomb load consisted of ten 30-pound bombs carried internally or four 100-pound bombs externally.

* *Approximate performance figures.*

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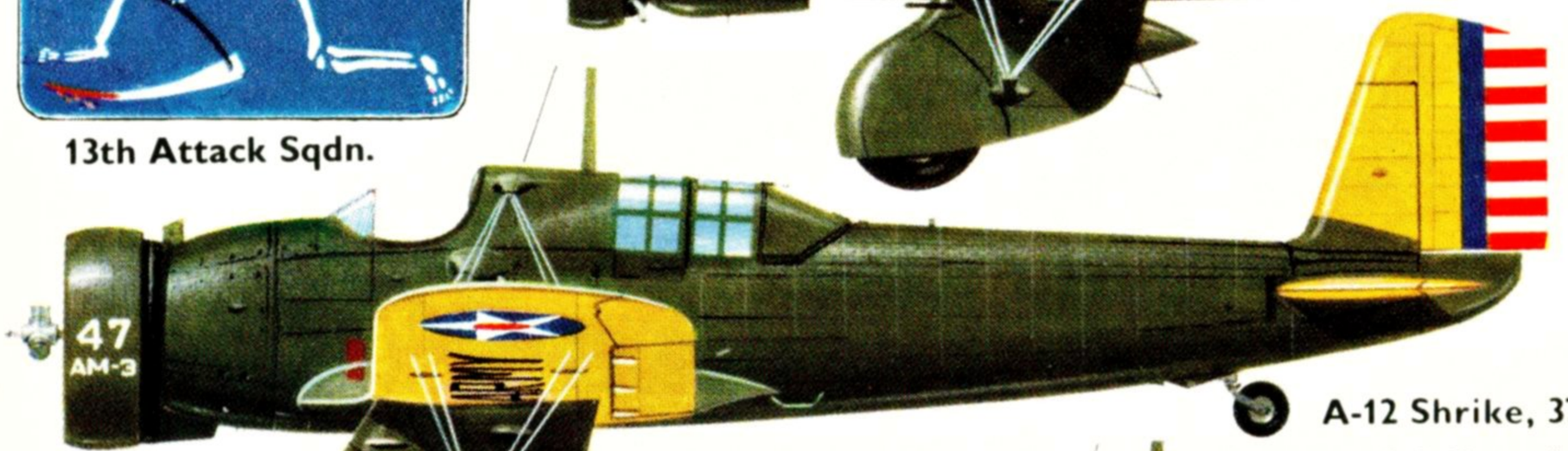
Curtiss Y1A-8 Shrike, 90th Attack Squadron, 3rd Attack Group, U.S.A.A.C., 1933.

90th Attack Sqdn.

Curtiss YA-10 Shrike, 13th Attack Sqdn., 3rd Attack Group, 1933.

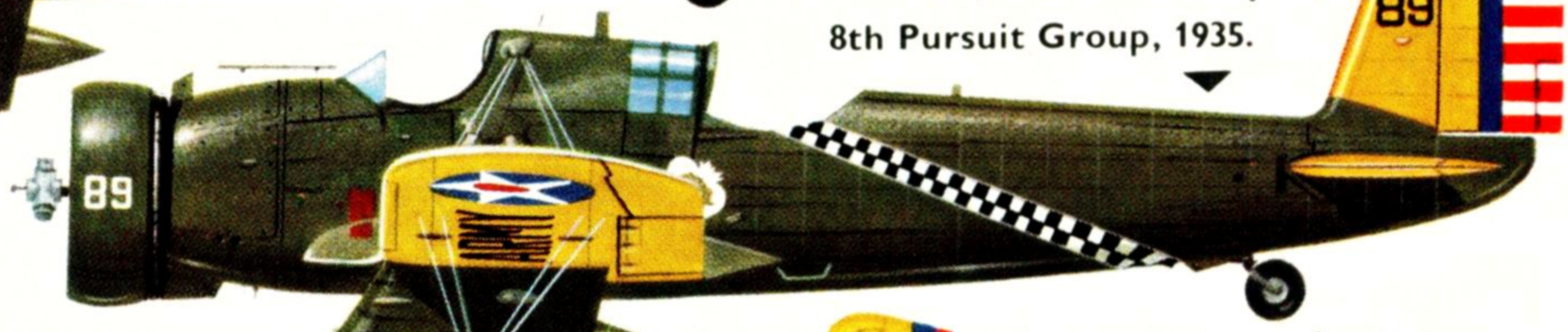
13th Attack Sqdn.

37th Attack Sqdn.




A-12 Shrike, 37th Attack Sqdn., 8th Pursuit Group, 1935.

Curtiss A-12 Shrike, Air Mail duties, Panama Canal Zone, 1934.




A-12 Shrike, 13th Attack Sqdn., 3rd Attack Group, 1935.

26th Attack Sqdn.

A-12 Shrike, 26th Attack Sqdn., 18th Pursuit Group, 1939.

13th Attack Sqdn., 1935 style.

Winter Manoeuvres polar bear insignia.

A-12 Shrike, 8th Attack Sqdn., 3rd Attack Group, Winter Manoeuvres, 1935.

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